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WHO: The Office of the Federal Register.

WHAT: Free public briefings (approximately 3 hours) to present:
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WHY: To provide the public with access to information necessary to research Federal agency regulations which directly affect them. There will be no discussion of specific agency regulations.

WASHINGTON, DC
(two briefings)

WHEN: July 15 at 9:00 am and 1:30 pm

WHERE: Office of the Federal Register, 7th Floor Conference Room, 800 North Capitol Street NW, Washington, DC (3 blocks north of Union Station Metro)

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Contents

Federal Register
Vol. 58, No. 125
Thursday, July 1, 1993

Agricultural Marketing Service
See Packers and Stockyards Administration
RULES
Milk marketing orders:
Memphis, TN, 35359
Nashville, TN, 35361
Paducah, KY, 35362

Agriculture Department
See Agricultural Marketing Service
See Forest Service
See Packers and Stockyards Administration
RULES
Organization, functions, and authority delegations:
Assistant Secretary for Science and Education et al., 35359
NOTICES
Agency information collection activities under OMB review, 35425
Program payments; income tax exclusion; preliminary purpose determinations:
South Carolina Hugo incentives program, 35427
World Declaration and Plan of Action for Nutrition; availability and comment solicitation, 35426

Children and Families Administration
NOTICES
Grants and cooperative agreements; availability, etc.:
Family violence prevention and services; discretionary funds program (1993 FY), 35740

Commerce Department
See Foreign-Trade Zones Board
See International Trade Administration
See National Oceanic and Atmospheric Administration

Committee for the Implementation of Textile Agreements
NOTICES
Cotton, wool, and man-made textiles:
Thailand, 35434

Customs Service
NOTICES
Commercial laboratory accreditations:
United Chemical Testing, Inc., 35506
Generalized System of Preferences; procedures, 35506

Defense Department
See Defense Intelligence Agency
See Navy Department
RULES
Civilian health and medical program of uniformed services (CHAMPUS):
Mental health services, 35400
NOTICES
Agency information collection activities under OMB review, 35434
Committees; establishment, renewal, termination, etc.:
Armament Retooling and Manufacturing Support (ARMS) Executive Advisory Committee, 35434
Cultural and Natural Resources Committee, 35435
DOD directives system annual index; availability, 35435
Grants and cooperative agreements; availability, etc.:
Local educational agencies assistance, 35435

Defense Intelligence Agency
NOTICES
Senior Executive Service:
Performance Review Committee; membership, 35438

Drug Enforcement Administration
NOTICES
Applications, hearings, determinations, etc.:
Johnson Matthey, Inc., 35466
Radian Corp., 35466
Roche Diagnostic Systems, Inc., 35466
Sanofi Winthrop Pharmaceutical, 35467

Education Department
RULES
Special education and rehabilitation services:
Individuals with disabilities; projects for initiating special recreational programs, 35762
NOTICES
Grants and cooperative agreements; availability, etc.:
Independent living centers, 35720
Individuals with disabilities; projects for initiating special recreational programs, 35767

Energy Department
See Energy Information Administration
See Federal Energy Regulatory Commission
See Western Area Power Administration
NOTICES
Atomic energy agreements; subsequent arrangements, 35441
Grant and cooperative agreement awards:
Community College Southern Nevada, 35439
Michigan State University, 35439
University of—
Nevada, 35440
Rochester, 35440
Utah, 35441
Natural gas exportation and importation:
American Hunter Exploration Ltd., 35446
El Paso Gas Marketing Co., 35446
Meridian Marketing & Transmission Corp., 35446

Energy Information Administration
NOTICES
Agency information collection activities under OMB review, 35441

Environmental Protection Agency
PROPOSED RULES
Air pollution control:
Clean fuel fleet emission standards, 35420
NOTICES
Agency information collection activities under OMB review, 35449
Air quality; prevention of significant deterioration (PSD):
Permit determinations, etc.—
Region II, 35450
Clean Air Act:
Citizens suits; proposed settlements, 35451

Drinking water:
Public water supply supervision program—
Michigan, 35451
Meetings:
California Air Resources Board, 35452
Health and Environmental Assessment Office; public workshops, 35454
Science Advisory Board, 35454
Municipal solid waste landfill permit programs:
Kentucky, 35454
Superfund; response and remedial actions, proposed settlements, etc.:
Valley Plating Superfund Site, VA, 35456

Executive Office of the President
See Presidential Documents

Federal Aviation Administration
PROPOSED RULES
Airworthiness directives:
Fokker, 35413
Airworthiness standards:
Special conditions—
Aerospatiale models AS-365N1 and AS-365N2 helicopters, 35411
NOTICES
General aviation activity and avionics survey; improvements; meeting, 35000
Passenger facility charges; applications, etc.:
Tweed-New Haven Airport, CT, 35500
Yuma County International Airport, AZ, 35501

Federal Communications Commission
RULES
Radio stations; table of assignments:
Delaware, 35410
Florida, 35409
Oregon, 35410
PROPOSED RULES
Radio stations; table of assignments:
Kansas, 35420
Minnesota, 35421
Missouri, 35421
NOTICES
Agency information collection activities under OMB review, 35457
Meetings:
Alaska Federal-State Joint Board, 35457
Applications, hearings, determinations, etc.:
Dolgoff, Howard B., et al., 35457
Metrocomo, Inc., 35458
Yates, Stephen W., 35458

Federal Emergency Management Agency
RULES
Preparedness:
Offsite radiological emergency preparedness program; service fees, 35770

Federal Energy Regulatory Commission
PROPOSED RULES
Organization, functions, and authority delegations:
Office of Hydropower Licensing, 35415
NOTICES
Electric rate, small power production, and interlocking directorate filings, etc.:
Brush Cogeneration Partners et al., 35442
Natural gas certificate filings:
Ozark Gas Transmission System et al., 35443
Natural Gas Policy Act:
State jurisdictional agencies tight formation recommendations; preliminary findings—
Land Management Bureau, 35445
Texas Railroad Commission, 35444
Applications, hearings, determinations, etc.:
CNG Transmission Corp., 35445
Northwest Pipeline Corp., 35445

Federal Highway Administration
NOTICES
Environmental statements; notice of intent:
Little River, AR, et al., 35501
Monroe County, PA, 35502

Federal Mediation and Conciliation Service
RULES
Agency ethics regulations; amendments
Correction, 35377

Federal Railroad Administration
NOTICES
Traffic control systems; discontinuance and removal:
Burlington Northern Railroad Co. et al., 35503

Federal Trade Commission
PROPOSED RULES
Industry guides:
Greeting card industry, discriminatory practices, 35414
NOTICES
Premerger notification waiting periods; early terminations, 35458
Prohibited trade practices:
AE Clevite, Inc., 35459

Financial Management Service
See Fiscal Service

Fiscal Service
RULES
Treasury tax and loan depositaries, 35395
NOTICES
Surety companies acceptable on Federal bonds; annual list, 35778

Fish and Wildlife Service
NOTICES
Endangered and threatened species:
Recovery plans—
Atlantic salt marsh snake, 35462
Endangered and threatened species permit applications, 35462

Food and Drug Administration
PROPOSED RULES
Medical devices:
Gastroenterology-urology devices—
Penile inflatable implant; premarket approval requirement, 35416
NOTICES
Medical devices; premarket approval:
AIA-PACK AFP, 35460

Foreign Assets Control Office
RULES
Federal Republic of Yugoslavia (Serbia and Montenegro) sanctions regulations, 35828

Foreign-Trade Zones Board
NOTICES
Applications, hearings, determinations, etc.:
Ohio, 35427
Pennsylvania, 35428

Forest Service
NOTICES
Boundary establishment, descriptions, etc.:
Skagit Purchase Unit, WA, 35426
Sur Sur Purchase Unit, CA, 35427

Health and Human Services Department
See Children and Families Administration
See Food and Drug Administration
See Substance Abuse and Mental Health Services Administration
NOTICES
Organization, functions, and authority delegations:
Assistant Secretary for Health, 35460
Assistant Secretary for Health and Scientific Affairs, 35460

Housing and Urban Development Department
RULES
Mortgage and loan insurance programs:
Mortgages or property formerly held by Secretary; title waivers, 35369
PROPOSED RULES
Low income housing:
Housing assistance payments (Section 8)—
Tenancy in new construction units; income eligibility, 35416
Mortgage and loan insurance programs:
FHA multifamily processing; revision, 35724

Immigration and Naturalization Service
RULES
Immigration:
Chinese Student Protection Act; implementation, 35832

Interior Department
See Fish and Wildlife Service
See Land Management Bureau

Internal Revenue Service
PROPOSED RULES
Employment taxes and collection of income taxes at source:
Railroad Retirement Tax Act regulations; update
Correction, 35419
Supplemental annuity tax; railroad retirement
Correction, 35419

International Trade Administration
NOTICES
Antidumping:
Antifriction bearings (other than tapered roller bearings) and parts from—
Sweden, 35428

International Trade Commission
NOTICES
Import investigations:
Flat-rolled carbon steel products, 35465

Interstate Commerce Commission
NOTICES
Rail carriers:
Waybill data; release for use, 35466

Justice Department
See Drug Enforcement Administration
See Immigration and Naturalization Service
RULES
Organization, functions, and authority delegations:
Administrator, Drug Enforcement Administration; personal injury or property damage claim settlement 35371
Voting Rights Act; implementation:
Minority language groups, 35371

Labor Department
See Occupational Safety and Health Administration
See Pension and Welfare Benefits Administration

Land Management Bureau
RULES
Public land orders:
Oregon, 35408
Utah, 35409
NOTICES
Realty actions; sales, leases, etc.:
California, 35463
Montana, 35463
Recreation management restrictions, etc.:
Caliente Resource Area, CA; camping and occupancy stay limits, 35464
Withdrawal and reservation of lands:
Nevada, 35464

National Commission on Manufactured Housing
NOTICES
Meetings, 35472

National Credit Union Administration
RULES
Credit unions:
Voluntary liquidation, 35363

National Highway Traffic Safety Administration
PROPOSED RULES
Motor vehicle theft prevention standards.
High theft lines exemption, 35422

National Oceanic and Atmospheric Administration
NOTICES
Grants and cooperative agreements; availability, etc.:
Climate and global change program, 35428
Permits:
Marine mammals, 35433

National Science Foundation
NOTICES
Antarctic Conservation Act of 1978; permit applications, etc., 35472
Meetings:
Biological and Critical Systems Special Emphasis Panel, 35473
Biological Sciences Advisory Committee, 35473
Electrical and Communications Systems Special Emphasis Panel, 35474
Elementary, Secondary, and Informal Education Special Emphasis Panel, 35474
Networking and Communications Research and Infrastructure Special Emphasis Panel, 35474
Polar Programs Special Emphasis Panel, 35474
Science and Technology Infrastructure Special Emphasis Panel, 35474

Navy Department
NOTICES
Inventions, Government-owned; availability for licensing, 35438
Patent licenses; non-exclusive, exclusive, or partially exclusive:
Etrema Products, Inc., 35439

Nuclear Regulatory Commission
NOTICES
Environmental statements; availability, etc.:
Illinois Power Co. et al., 35475
Generic letters:
Inaccuracy of motor-operated valve diagnostic equipment, 35476
Petitions; Director's decisions:
Texas Utilities Electric Co., 35476
Applications, hearings, determinations, etc.:
Nebraska Public Power District, 35477

Occupational Safety and Health Administration
RULES
Shipyard employment safety and health standards:
Threshold limit values and toxic substance standards, 35512

Packers and Stockyards Administration
NOTICES
Stockyards; posting and deposting:
Southwind Horse Auction, SC, 35427

Pension and Welfare Benefits Administration
NOTICES
Employee benefit plans; prohibited transaction exemptions:
Navistar International Transportation Corp. et al., 35647

Pension Benefit Guaranty Corporation
RULES
Single employer plans:
Miscellaneous amendments, 35377

Personnel Management Office
NOTICES
Agency information collection activities under OMB review, 35478

Presidential Documents
ADMINISTRATIVE ORDERS
Japan; certification of nondiscrimination in procurement of U.S. products for government use; authority delegation to U.S. Trade Representative (Presidential Determination No. 93-29 of June 29, 1993), 35357

Public Health Service
See Food and Drug Administration
See Substance Abuse and Mental Health Services Administration

Securities and Exchange Commission
RULES
Securities:
Canadian issuers, multijurisdictional disclosure system; forms; amendments, 35367
NOTICES
Self-regulatory organizations; proposed rule changes:
Pacific Stock Exchange, Inc., 35491, 35496

Small Business Administration
NOTICES
License surrenders:
Dixie Business Investment Co., 35498
First of Nebraska Investment Corp., 35498
Applications, hearings, determinations, etc.:
First Security Business Investment Corp., 35498

State Department
NOTICES
Meetings:
Shipping Coordinating Committee, 35499

Substance Abuse and Mental Health Services Administration
NOTICES
Grant and cooperative agreement awards:
Metropolitan Washington Council of Governments, 35461

Textile Agreements Implementation Committee
See Committee for the Implementation of Textile Agreements

Transportation Department
See Federal Aviation Administration
See Federal Highway Administration
See Federal Railroad Administration
See National Highway Traffic Safety Administration
NOTICES
Aviation proceedings:
Agreements filed; weekly receipts, 35499
Certification of public convenience and necessity and foreign air carrier permits; weekly applications, 35499

Treasury Department
See Customs Service
See Fiscal Service
See Foreign Assets Control Office
See Internal Revenue Service
NOTICES
Agency information collection activities under OMB review, 35504

United States Information Agency
NOTICES
Grants and cooperative agreements; availability, etc.:
U.S.-NIS summer language teacher exchange program, 35507

Western Area Power Administration
NOTICES
Power rate adjustments:
Amistad and Falcon Projects, TX, et al., 35446
Salt Lake City Area Integrated Projects, UT, et al., 35449

Separate Parts In This Issue

Part II
Department of Labor, Occupational Safety and Health Administration, 35512

Part III
Department of Education, 35720

Part IV
Department of Housing and Urban Development, 35724

Part V
Department of Health and Human Services, Administration for Children and Families, 35740

Part VI
Department of Education, 35762

Part VII
Federal Emergency Management Agency, 35770

Part VIII
Department of the Treasury, Fiscal Service, 35778

Part IX
Department of the Treasury, Foreign Assets Control Office 35828

Part X
Department of Justice, Immigration and Naturalization Service, 35832

Reader Aids
Additional information, including a list of public laws, telephone numbers, and finding aids, appears in the Reader Aids section at the end of this issue.

Electronic Bulletin Board
Free Electronic Bulletin Board service for Public Law numbers, Federal Register finding aids, and a list of Clinton Administration officials is available on 202–275–1538 or 275–0920.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

3 CFR
Administrative Orders:
Determinations:
93–29 of June 29, 1993 35357

7 CFR
2 35359
1097 34359
1098 35361
1099 34362

8 CFR
245 35832

12 CFR
710 35363

14 CFR
Proposed Rules:
29 35411
39 35413

16 CFR
Proposed Rules:
244 35414

17 CFR
239 35367
249 35367

18 CFR
Proposed Rules:
375 35415

21 CFR
Proposed Rules:
876 35416

24 CFR
203 35369
Proposed Rules:
207 35724
213 35724
220 35724
221 35724
232 35724
234 35724
241 35724
244 35724
880 35416
881 35416
883 35416
884 35416
886 35416

26 CFR
Proposed Rules:
31 (2 documents) 35419

28 CFR
0 35371
55 35371

29 CFR
1400 35377
1915 35512
2606 35377
2612 35377
2615 35377
2616 35377
2622 35377
2623 35377

31 CFR
203 35395
585 35828

32 CFR
199 35400

34 CFR
378 35762

40 CFR
Proposed Rules:
88 35420

43 CFR
Public Land Orders:
6986 35408
6988 35409

44 CFR
354 35770

47 CFR
73 (3 documents) 35409, 35410
Proposed Rules:
73 (3 documents) 35420, 35421

49 CFR
Proposed Rules:
543 35422

Federal Register
Vol. 58, No. 125
Thursday, July 1, 1993

Presidential Documents

Title 3—

The President

Presidential Determination No. 93–29 of June 29, 1993

Delegation of Authority To Modify or Terminate Title VII Trade Action Taken Against Japan

Memorandum for the United States Trade Representative

By the authority vested in me by the Constitution and laws of the United States, including 3 U.S.C. section 301, I hereby delegate to the United States Trade Representative the powers granted the President:

(1) in section 305(g)(1)(A) of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2515(g)(1)(A) (the Act)), to formally identify Japan as a country that discriminates against U.S. products or services in government procurement of construction, architectural, and engineering services; and

(2) in section 305(g)(2) of the Act to impose, modify, or restrict sanctions in response to the discrimination so identified.

This delegation of authority is effective until July 2, 1993. You are authorized and directed to publish this determination in the **Federal Register.**

William J. Clinton

THE WHITE HOUSE,
Washington, June 29, 1993.

[FR Doc. 93–15789
Filed 6–29–93; 3:52 pm]
Billing code 3190–01–P

Rules and Regulations

Federal Register
Vol. 58, No. 125
Thursday, July 1, 1993

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

7 CFR Part 2

Revisions of Delegations of Authority

AGENCY: Department of Agriculture.

ACTION: Final rule.

SUMMARY: This document cancels delegations of authority to the Assistant Secretary for Science and Education and the Administrator, Extension Service to provide education and outreach programs for socially disadvantaged farmers and ranchers under 7 U.S.C. 2279. The document delegates that authority to the Under Secretary for Small Community and Rural Development and to the Administrator, Farmers Home Administration. This action is being taken to provide outreach and technical assistance to socially disadvantaged farmers and ranchers to own and operate farms and ranches. The intended effect of this action is to encourage these farmers and ranchers to participate in agricultural programs.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Lynn Pickinpaugh, Director, Special Programs, Office of Deputy Administrator for Program Operations, Farmers Home Administration, U.S. Department of Agriculture, room 4923, South Agriculture Building, 14th Street and Independence Avenue, SW., Washington, DC 20250, telephone 202–720–0358.

SUPPLEMENTARY INFORMATION: This rule relates to internal agency management. Therefore, pursuant to 5 U.S.C. 553, it is exempt from the notice and comment procedures of the Administrative Procedure Act, and this rule may be effective less than 30 days after publication in the Federal Register. Further, since this rule relates to internal agency management, it is exempt from the provisions of Executive Order Nos. 12291 and 12778. This action is not a rule as defined by 5 U.S.C. 601 et seq. and thus is exempt from its provisions. This rule also is exempt from the requirements of the National Environmental Policy Act, as amended (42 U.S.C. chapter 35).

List of Subjects in 7 CFR Part 2

Authority delegations (Government agencies).

Accordingly, part 2, title 7, Code of Federal Regulations is amended as follows:

PART 2—DELEGATIONS OF AUTHORITY BY THE SECRETARY OF AGRICULTURE AND GENERAL OFFICERS OF THE DEPARTMENT

1. The authority citation for part 2 continues to read as follows:

Authority: 5 U.S.C. 301 and Reorganization Plan No. 2 of 1953.

Subpart C—Delegations of Authority to the Deputy Secretary, the Under Secretary for International Affairs and Commodity Programs, the Under Secretary for Small Community and Rural Development, and Assistant Secretaries

2. Section 2.23 is amended by revising the section heading and by adding paragraph (a)(5) to read as follows:

§ 2.23 Under Secretary for Small Community and Rural Development.

* * * * *

(a) * * *

(5) Make grants and enter into contracts and other agreements to provide outreach and technical assistance to socially disadvantaged farmers and ranchers under 7 U.S.C. 2279.

* * * * *

§ 2.30 [Amended]

3. Section 2.30 is amended by removing and reserving paragraph (a)(34).

Subpart I—Delegations of Authority by the Under Secretary for Small Community and Rural Development

4. Section 2.70 is amended by adding paragraph (a)(15) to read as follows:

§ 2.70 Administrator, Farmers Home Administration

(a) * * *

(15) Make grants and enter into contracts and other agreements to provide outreach and technical assistance to socially disadvantaged farmers and ranchers under 7 U.S.C. 2279.

* * * * *

Subpart N—Delegation of Authority by the Assistant Secretary for Science and Education

§ 2.108 [Amended]

5. Section 2.108 is amended by removing and reserving paragraph (a)(6).

For Subpart C. Mike Espy, *Secretary of Agriculture.*

Dated: June 22, 1993.

For Subpart I. Bob J. Nash, *Under Secretary for Small Community and Rural Development.*

Dated: May 17, 1993.

For Subpart N. R.D. Plowman, *Acting Assistant Secretary for Science and Education.*

Dated: May 11, 1993.

[FR Doc. 93–15476 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–01–M

Agricultural Marketing Service

7 CFR Part 1097

[DA–93–05]

Milk in the Memphis, Tennessee, Marketing Area; Termination of the Order

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Termination order.

SUMMARY: This document terminates all but certain administrative provisions of the Memphis, Tennessee, marketing order, effective midnight, July 31, 1993. The remaining administrative provisions will be terminated at a later date.

On the basis of a public hearing on proposed amendments to all Federal milk orders, the Department concluded that the order should be amended in several respects. In a referendum, the issuance of the proposed amended order was not approved by the required producer vote. Since the Department had determined from the hearing evidence that the order must be amended to carry out the purpose of the Act, and in view of insufficient producer support for the proposed amended order, the Department notified the public that termination of the present order was being considered.

Comments on the proposed termination were invited.

After reviewing the comments filed, and on the basis of the record of the public hearing and the results of the producer referendum, the Department has concluded that the present order should be terminated.

EFFECTIVE DATE: Midnight, July 31, 1993.

FOR FURTHER INFORMATION CONTACT: Richard A. Glandt, Marketing Specialist, USDA/AMS/Dairy Division, Order Formulation Branch, room 2968, South Building, P.O. Box 96456, Washington, DC 20090–6456, (202) 720–9368.

SUPPLEMENTARY INFORMATION: Prior documents in this proceeding. Advance Notice of Proposed Rulemaking: Issued March 29, 1990; published April 3, 1990 (55 FR 12369).

Notice of Hearing: Issued July 11, 1990; published July 17, 1990 (55 FR 29034).

Extension of Time for Filing Briefs and Reply Briefs: Issued March 28, 1991; published April 3, 1991 (56 FR 13603).

Recommended Decision: Issued November 6, 1991; published November 22, 1991 (56 FR 58972).

Extension of Time for Filing Exceptions: Issued December 24, 1991; published January 6, 1992 (57 FR 383).

Final Decision: Issued February 5, 1993; published March 5, 1993 (58 FR 12634).

Proposed Termination of order: Issued April 20, 1993; published April 27, 1993 (58 FR 25576).

The Regulatory Flexibility Act (5 U.S.C. 601–612) requires the Agency to examine the impact of a final rule on small entities. Pursuant to 5 U.S.C. 605(b), the Administrator of the Agricultural Marketing Service has certified that this action would not have a significant economic impact on a substantial number of small entities. Such action is expected to result in the dairy farmers and regulated handlers now subject to the Memphis order becoming subject to comparable regulatory provisions of orders regulating the handling of milk in adjacent marketing areas.

This action has been reviewed by the Department in accordance with Departmental Regulation 1512–1 and criteria contained in Executive Order 12291 and has been determined to be a "non-major" rule.

This termination order has been reviewed under Executive Order 12778, Civil Justice Reform. This action is not intended to have a retroactive effect. This action will not preempt any state or local laws, regulations, or policies, unless they present an irreconcilable conflict with the rule.

The Agricultural Marketing Agreement Act, as amended (7 U.S.C. 601–674) ("the Act"), provides that administrative proceedings must be exhausted before parties may file suit in court. Under section 8c(15)(A) of the Act, any handler subject to an order may file with the Secretary a petition stating that the order, any provisions of the order, or any obligation imposed in connection with the order is not in accordance with law and requesting a modification of the order or to be exempted from the order. A handler is afforded the opportunity for a hearing on the petition. After a hearing, the Secretary would rule on the petition. The Act provides that the district court of the United States in any district in which the handler is an inhabitant, or has its principal place of business, has jurisdiction in equity to review the Secretary's ruling on the petition, provided a bill in equity is filed not later than 20 days after the date of the entry of the ruling.

Pursuant to the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601, *et seq.*), hereinafter referred to as the "Act," and of the current order regulating the handling of the milk in the Memphis, Tennessee, marketing area (7 CFR part 1097), it is hereby found and determined that:

(a) The terms and provisions of the current order do not tend to effectuate the declared policy of the Act.

A public hearing on proposed amendments to all Federal milk orders was held in September, October, and November 1990, pursuant to notice thereof issued July 11, 1990 (55 FR 29034). Following the issuance of a recommended decision and the opportunity for filing exceptions, the Acting Assistant Secretary for Marketing and Inspection Services issued on February 5, 1993 (58 FR 12364), a final decision on the issues considered at the hearing. The Department concluded that all of the orders, including the Memphis, Tennessee, order, should be amended in several respects and that the provisions of the proposed amended orders are necessary to effectuate the declared policy of the Act. The changes adopted provided for:

(1) Three uniform classes of milk use in all orders;

(2) Defining liquid concentrated milk (up to 50% solids) as a fluid milk product; and

(3) Reducing somewhat the payment required when nonfat dry milk (a Class III use) is reconstituted for disposition as Class I milk.

Having found on the basis of hearing evidence that certain provisions of the current order should be amended, it is found that the current provisions in question are not effectuating the declared policy of the Act and should be terminated pursuant to section 8c(16)(A) of the Act.

(b) The required number of producers do not favor the issuance of the proposed amended order as set forth in the February 5, 1993, decision.

A referendum was ordered in conjunction with the Final Decision issued on February 5, 1993, to determine whether producers approved the issuance of the order as proposed to be amended by the decision issued on February 5, 1993. Less than 50% of the producers who participated in the referendum favored the issuance of the proposed amended order. This is substantialy less than required before an amended order may be issued.

(c) The comments filed in response to the notice of the proposed termination (58 FR 25576) do not provide sufficient basis for not proceeding with the termination.

Numerous comments were received. A form letter was filed by many people stating opposition to termination of the Memphis, Tennessee, order.

Two other comments were received, one on behalf of a proprietary handler, a cooperative association and other dairy farmers, and the other one on behalf of two other cooperative associations. The latter comment supported termination of the Memphis, Tennessee, order and maintained that the Secretary must terminate an order whenever the requisite percentage of producers have not approved issuance of an amended order. This comment was filed jointly on behalf of Associated Milk Producers, Inc. (AMPI) and Dairymen, Inc.

The other comment, filed jointly on behalf of Turner Dairies, Inc., Arkansas Dairy Cooperative Association, Inc., and other dairy farmers (Turner, et al.), opposed termination of the order. This comment maintains that the order should not be terminated because the representative period determined by the Secretary for the purpose of determining whether producers favor issuance of the amended order was flawed. The comment contends that the market share of AMPI is declining and therefore the cooperative may not represent a majority of producers currently on the market. The comment contends that the producers supplying the market "* * * have changed quite dramatically since April 1992."

The comment on behalf of Turner, et al. is in error regarding the composition of the Memphis, Tennessee, market's producers. From April 1992 to April

1993 AMPI continuously represented a substantial majority of the market's producers and producer milk. Since AMPI is entitled to vote on behalf of its member producers, there is no way the order could be approved currently unless AMPI chose to vote in favor of the amended order. Because the order no longer effectuates the purposes of the Act and is not supported by the requisite producer vote, we must proceed to terminate the order.

List of Subjects in 7 CFR Part 1097

Milk marketing orders.

Order

It is therefore ordered, That the terms and provisions of the order, as amended, regulating the handling of milk in the Memphis, Tennessee, marketing area (7 CFR part 1097), except § 1097.1, which incorporates the General Provisions in part 1000, are hereby terminated effective at midnight, July 31, 1993.

PART 1097—MILK IN THE MEMPHIS, TENNESSEE, MARKETING AREA

1. The authority citation for 7 CFR part 1097 continues to read as follows:

Authority: Secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674.

§§ 1097.2 through 1097.95 [Removed]

2. Sections 1097.2 through 1097.95 are removed.

EFFECTIVE DATE: Midnight, July 31, 1993.

Dated: June 25, 1993.

Eugene Branstool,

Assistant Secretary, Marketing and Inspection Services.

[FR Doc. 93–15544 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–02–P

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7 CFR Part 1098

[DA–93–10]

Milk in the Nashville, Tennessee, Marketing Area; Termination of the Order

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Termination order.

SUMMARY: This document terminates all but certain administrative provisions of the Nashville, Tennessee, marketing order, effective midnight, July 31, 1993. The remaining administrative provisions will be terminated at a later date.

On the basis of a public hearing on proposed amendments to all Federal milk orders, the Department concluded that the order should be amended in several respects. In a referendum, the issuance of the proposed amended order was not approved by the required two-thirds producer vote. Since the Department had determined from the hearing evidence that the order must be amended to carry out the applicable statutory authority, and in view of insufficient producer support for the proposed amended order, the Department notified the public that termination of the present order was being considered. Comments on the proposed termination were invited.

After reviewing the comments filed, and on the basis of the record of the public hearing and the results of the producer referendum, the Department has concluded that the present order should be terminated.

EFFECTIVE DATE: Midnight, July 31, 1993.

FOR FURTHER INFORMATION CONTACT: Richard A. Glandt, Marketing Specialist, USDA/AMS/Dairy Division, Order Formulation Branch, Room 2968, South Building, P.O. Box 96456, Washington, DC 20090–6456, (202) 720–9368.

SUPPLEMENTARY INFORMATION: Prior documents in this proceeding.

Advance Notice of Proposed Rulemaking: Issued March 29, 1990; published April 3, 1990 (55 FR 12369).

Notice of Hearing: Issued July 11, 1990; published July 17, 1990 (55 FR 29034).

Extension of Time for Filing Briefs and Reply Briefs: Issued March 28, 1991; published April 3, 1991 (56 FR 13603).

Recommended Decision: Issued November 6, 1991; published November 22, 1991 (56 FR 58972).

Extension of Time for Filing Exceptions: Issued December 24, 1991; published January 6, 1992 (57 FR 383).

Final Decision: Issued February 5, 1993; published March 5, 1993 (58 FR 12634).

Extension of time for Conducting Referendum on Proposed Amended Order: Issued March 11, 1993; published March 17, 1993 (58 FR 14344).

Proposed Termination of order: Issued April 20, 1993; published April 27, 1993 (58 FR 25577).

The Regulatory Flexibility Act (5 U.S.C. 601–612) requires the Agency to examine the impact of a final rule on small entities. Pursuant to 5 U.S.C. 605(b), the Administrator of the Agricultural Marketing Service has certified that this action would not have a significant economic impact on a substantial number of small entities. Such action is expected to result in the dairy farmers and regulated handlers now subject to the Nashville order becoming subject to comparable regulatory provisions of orders regulating the handling of milk in adjacent marketing areas.

This action has been reviewed by the Department in accordance with Departmental Regulation 1512–1 and criteria contained in Executive Order 12291 and has been determined to be a "non-major" rule.

This termination order has been reviewed under Executive Order 12778, Civil Justice Reform. This action is not intended to have a retroactive effect. This action will not preempt any state or local laws, regulations, or policies, unless they present an irreconcilable conflict with the rule.

The Agricultural Marketing Agreement Act, as amended (7 U.S.C. 601–674) ("the Act"), provides that administrative proceedings must be exhausted before parties may file suit in court. Under section 8c(15)(A) of the Act, any handler subject to an order may file with the Secretary a petition stating that the order, any provisions of the order, or any obligation imposed in connection with the order is not in accordance with law and requesting a modification of the order or to be exempted from the order. A handler is afforded the opportunity for a hearing on the petition. After a hearing, the Secretary would rule on the petition. The Act provides that the district court of the United States in any district in which the handler is an inhabitant, or has its principal place of business, has jurisdiction in equity to review the Secretary's ruling on the petition, provided a bill in equity is filed not later than 20 days after the date of the entry of the ruling.

Pursuant to the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601, *et seq.*), hereinafter referred to as the "Act," and of the current order, regulating the handling of the milk in the Nashville, Tennessee, marketing area (7 CFR part 1098), it is hereby found and determined that:

(a) The terms and provisions of the current order do not tend to effectuate the declared policy of the Act.

A public hearing on proposed amendments to all Federal milk orders was held in September, October, and November 1990, pursuant to notice thereof issued July 11, 1990 (55 FR 29034). Following the issuance of a recommended decision and the opportunity for filing exceptions, the Acting Assistant Secretary for Marketing and Inspection Services issued on February 5, 1993 (58 FR 12364), a final decision on the issues considered at the hearing. It was concluded that all the

orders, including the Nashville, Tennessee, order, should be amended in several respects and that the provisions of the proposed amended orders are necessary to effectuate the declared policy of the Act. The changes adopted provided for:

(1) Three uniform classes of milk use in all the orders;

(2) Defining liquid concentrated milk (up to 50 percent solids) as a fluid milk product; and,

(3) Reducing somewhat the payment required when nonfat dry milk (a Class III use) is reconstituted for disposition as Class I milk.

Having found on the basis of the hearing evidence that certain provisions of the current order should be amended, it is found that the current provisions in question are not effectuating the declared policy of the Act and should be terminated pursuant to section 8c(16)(A) of the Act.

(b) In a referendum concluded on March 25, 1993 the required producer approval was not obtained to enable the Department to issue the proposed order as set forth in the February 5, 1993, Final decision. The referendum was initially ordered in conjunction with the Final Decision. The Acting Assistant Secretary issued an order on April 20, 1993, extending until March 25, 1993, the time for conducting a referendum to determine whether producers approved the issuance of the order. Less than the required two-thirds approval by producers who participated in the referendum was obtained in favor of the proposed amended order. The Act requires approval by at least two-thirds of the producers voting in the referendum or by producers of at least two-thirds of the volume of milk represented by those voting in the referendum, before an amended order may be issued.

(c) The comments filed in response to the notice of the proposed termination (58 FR 25577) do not provide a sufficient basis for not proceeding with the termination.

Only one comment was received. A proprietary handler filed a comment stating that the Nashville order had served the market well and that the termination order will create chaotic marketing conditions in the area. The handler proposed delaying the termination of the order until proposals now being received by the Department to merge the Nashville order with several other southeastern orders have been considered and a merger of orders has become effective. In the alternative, the handler urged that if the Nashville order is terminated the Department should expedite the merger hearing process.

The handler did not provide sufficient support for delaying termination of the order. However, if a hearing on merger proposals is called, the question of expeditious action may be considered at that time.

List of Subjects in 7 CFR Part 1098

Milk marketing orders.

Order

It is therefore ordered, That the terms and provisions of the order, as amended, regulating the handling of milk in the Nashville, Tennessee, marketing area, (7 CFR part 1098) except § 1098.1, which incorporates the General Provisions in part 1000, are hereby terminated effective at midnight, July 31, 1993.

PART 1098—MILK IN THE NASHVILLE, TENNESSEE, MARKETING AREA

1. The authority citation for 7 CFR part 1098 continues to read as follows:

Authority: Secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674.

§§ 1098.2 through 1098.94 [Removed]

2. Sections 1098.2 through 1098.94 are removed.

Effective date: Midnight, July 31, 1993.

Dated: June 25, 1993.

Eugene Branstool,

Assistant Secretary, Marketing and Inspection Services.

[FR Doc. 93–15545 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–02–P

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7 CFR Part 1099

[Docket No. AO–183–A45; DA–90–017]

RIN 0581–AA37

Milk in the Paducah, Kentucky, Marketing Area; Referendum Order; Determination of Representative Period and Designation of Referendum Agent

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Referendum order.

SUMMARY: This document orders that a new referendum be conducted to determine whether producers favor issuance of the amended order regulating the handling of milk in the Paducah, Kentucky, marketing area, as proposed in the final decision issued by the Acting Assistant Secretary on February 5, 1993.

DATES: The referendum is to be completed on or before 15 days after the issuance of this order.

FOR FURTHER INFORMATION CONTACT: Richard A. Glandt, Marketing Specialist, USDA/AMS/DAIRY DIVISION, Order Formulation Branch, Room 2968, South Building, P.O. Box 96456, Washington, DC 20090–6456, 202/720–4829.

SUPPLEMENTARY INFORMATION: Prior documents in this proceeding:

Advance Notice of Proposed Rulemaking: Issued March 29, 1990; published April 3, 1990 (55 FR 12369).

Notice of Hearing: Issued July 11, 1990; published July 17, 1990 (55 FR 29034).

Extension of Time for Filing Briefs and Reply Briefs: Issued March 28, 1991; published April 3, 1991 (56 FR 13603).

Recommended Decision: Issued November 6, 1991; published November 22, 1991 (56 FR 58972).

Extension of Time for Filing Exceptions: Issued December 24, 1991; published January 6, 1992 (57 FR 383).

Final Decision: Issued February 5, 1993; published March 6, 1993 (58 FR 12634).

Proposed Termination of Order: Issued April 20, 1993; published April 27, 1993 (58 FR 25577).

On February 5, 1993, the Acting Assistant Secretary, Marketing and Inspection Services, issued a final decision on proposed amendments to all Federal milk orders, including the Paducah, Kentucky, order. A referendum was then held to determine if affected producers favored the issuance of the proposed amended order for the Paducah market. April 1992 was the representative period. The proposed amended order failed to receive the required producer approval.

A notice of proposed termination of the order was then issued, inviting comments on why the order should not be terminated. On the basis of the comments received, it appears that there is widespread support by current producers on the market for the proposed amended order. Therefore, it is concluded that a new referendum should be conducted using May 1993 as a representative period.

It is hereby directed that a referendum be conducted to determine whether the issuance of the amended order regulating the handling of milk in the Paducah, Kentucky, marketing area, which was attached to the decision of the Acting Assistant Secretary issued February 5, 1993, is approved by at least the required two-thirds of the producers, or by producers who produced at least two-thirds of the total

milk produced during the representative period.

The month of May 1993 is hereby determined to be the representative period for the conduct of such referendum.

Donald R. Nicholson is hereby designated agent of the Secretary to conduct such referendum in accordance with the procedure for the conduct of referenda (7 CFR 900.300 *et seq.*).

Such referendum shall be completed on or before 15 days from the issuance of this referendum order.

List of Subjects in 7 CFR Part 1099

Milk marketing orders.

The authority citation for 7 CFR part 1099 continues to read as follows:

Authority: Secs. 1–19, 48 Stat. 31, as amended; 7 U.S.C. 601–674.

Dated: June 25, 1993.

Eugene Branstool,

Assistant Secretary, Marketing and Inspection Services.

[FR Doc. 93–15546 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–02–P

NATIONAL CREDIT UNION ADMINISTRATION

12 CFR Part 710

Voluntary Liquidation

AGENCY: National Credit Union Administration (NCUA).

ACTION: Final rule.

SUMMARY: The NCUA Board is revising part 710 of its Rules and Regulations to update and streamline minimal procedures for voluntary liquidations of federal credit unions. This final rule is designed to assist a federal credit union's officials in the orderly dissolution of the institution and payment to members and provide NCUA with sufficient information to monitor the process and avoid losses to the National Credit Union Share Insurance Fund. It requires the development of a written liquidation plan, with a one year period for completing the liquidation; expands the notification to creditors requirement for federal credit unions with more than $500,000 in assets; eliminates certain reporting requirements; and expands the record retention period from three to five years to coincide with the Federal Credit Union Act's provision regarding destruction of records. For federally insured state credit unions, this rule only requires notification, with minimal reporting, to NCUA when the decision to voluntarily liquidate is made.

EFFECTIVE DATE: August 2, 1993

ADDRESSES: National Credit Union Administration, 1776 G Street, NW., Washington, DC 20456.

FOR FURTHER INFORMATION CONTACT: Jerry L. Courson, Special Assistant to the President, Asset Liquidation Management Center, National Credit Union Administration, 4807 Spicewood Springs Road, suite 5100, Austin, Texas 78759–8490, telephone (512) 795–0999; or James J. Engel, Deputy General Counsel, Office of General Counsel, National Credit Union Administration, 1776 G Street, Northwest, Washington, DC 20456, telephone (202) 682–9630.

SUPPLEMENTARY INFORMATION:

Background

The procedures for voluntary liquidations have not been updated since June of 1972. Most voluntary liquidations involve small credit unions, and in many cases the credit unions are marginally solvent. A more efficient liquidation process will help maintain the solvency and avoid the necessity of involuntary liquidation and the resulting losses to the National Credit Union Share Insurance Fund (NCUSIF). Also, since members do not have access to their shares during the liquidation process, it is in the best interest of the members to effect liquidation within a short period of time.

On October 13, 1992, the NCUA Board requested comments on proposed changes to the voluntary liquidation regulation. 57 FR 47999, October 21, 1992. The comment period ended on December 21, 1992. The proposal added a definition of "voluntary liquidation", reduced the time for notification to NCUA in several provisions, required prompt action in obtaining the membership vote, added a provision that once the liquidation was approved by the members, it could only be rescinded with regional director approval, provided for resubmission to the membership if the original proposal to liquidate was rejected, expanded the provision on notification to creditors, expanded the record retention period from three to five years, and consolidated and streamlined several provisions. It also eliminated the requirement for regional director approval for partial distribution, verification of account balances, reports at commencement and during the liquidation and final reports.

Comments were requested on all aspects of the proposed rule, as well as other issues involving voluntary liquidations. Comments were specifically requested on the need for a liquidation plan, a possible time limit for completing the liquidation, and whether the rule or portions of it should apply to state chartered credit unions entering voluntary liquidation.

Six comment letters were received: two comments from Federal credit unions, two from state credit union leagues, and two from national credit union trade associations. All the comments expressed general support of the proposed regulation and the effort to make the liquidation process more efficient.

The NCUA Board is adopting the regulation as proposed with two substantial amendments and several minor changes. First, § 710.2(e) is added to require the board of directors or the liquidating agent to develop a written liquidation plan that will provide for the liquidation of the credit union within one year. Second, § 710.0 is amended and § 710.9 is added to address the voluntary liquidation of federally insured state credit unions. Federally insured state credit unions should be liquidated under the provisions of state law and this is reflected in § 710.0. Section 710.9 requires the regional director be notified when a federally insured state credit union enters liquidation. The regional director is to be provided with copies of financial statements and any liquidation plan. This information is needed since credit unions entering voluntary liquidation are frequently marginally solvent and could become insolvent during the liquidation process.

The final rule also eliminates the proposed requirement to publish a notice of liquidation for federal credit unions with assets under $500,000, and reduces the requirement to one publication for federal credit unions with assets from $500,000 to $5 million.

Other minor changes have been made to clarify that a non-natural person can be appointed as liquidating agent, to indicate when the liquidating agent can be appointed, to require an extended bond coverage period, to address share draft and credit card accounts, to reinstate regional director approval of partial distributions, to correct a paragraph numbering error, to eliminate a reference to even share dollars, and to change the title by eliminating "Federal Credit Union".

Comments

Plan for Liquidation of Assets and Payment of Shares (Liquidation Plan)

Five of the commenters supported a requirement to develop a liquidation plan—one of those stating that such a plan is critical to an orderly process—and one commenter stated that a

liquidation plan is not necessary due to the small size of most credit unions entering voluntary liquidation. The Board agrees that a plan is necessary, particularly in light of the fact that member access to accounts is limited during the liquidation process. Therefore, § 710.2(e) has been added requiring federal credit unions entering voluntary liquidation to develop a liquidation plan and provide a copy of the plan to the regional director within 30 days of the decision to present the question of liquidation to the members. The revised manual on voluntary liquidations will provide guidance on the development of a liquidation plan. It should be kept in mind that the 30 day period, as a deadline, only applies to submission of the plan to the regional director. Considering the fact that the transaction of business is suspended when the board decides to submit the question of liquidation to the members under § 710.4, it is in the interest of the members to complete the plan as quickly as possible. This will also provide information for responding to members' questions when seeking their approval.

Federally Insured State Chartered Credit Unions

Three commenters suggest that the regulation apply to federally insured state credit unions and two commenters indicate the regulation should exclude state credit unions. Section 710.0 was expanded and § 710.9 was added to deal with this issue.

The NCUA Board has decided not to extend the rule to cover federally insured state chartered credit unions, but to only require notification to the regional director. Due to the fact that voluntary liquidations apply to solvent credit unions, NCUA should not normally be involved from an insurance standpoint. However, since some credit unions recently entering voluntary liquidation were only marginally solvent, the financial condition must be carefully monitored during the liquidation process. Accordingly, § 710.9 has been added to require federally insured state credit unions entering voluntary liquidation to provide the regional director current financial statements and, if available or required by state law or directive, a copy of any liquidation plan. These documents will serve as a basis for the regional director to establish a plan to monitor solvency during the voluntary liquidation. Section 710.2(e) contains a similar requirement for federal credit unions to submit financial statements to enable the agency to access solvency. While this rule does not require state chartered credit unions to prepare a liquidation plan, the Board strongly suggests that they do so.

Section 710.0, Scope, has been amended to specifically recognize that voluntary liquidations of state credit unions are conducted in accordance with state law or procedures established by the state regulator. In addition, because the rule contains the notice requirement for federally insured state credit unions, the reference to federal credit unions was removed from the title of this part.

Time Limit for Completing Voluntary Liquidation

Five commenters agreed that voluntary liquidations should be completed within a period of time to be specified in the regulation. One commenter suggested a one year period be specified and another suggested one year as a flexible guideline. The NCUA Board agrees that a time period should be specified and that one year is reasonable. Members' shares are not available during the liquidation period and the liquidation should be conducted as quickly as possible. Also, since income is reduced during the liquidation process funds available for a liquidating dividend could be reduced, and continued solvency is a risk. Accordingly, § 710.2(e) requires that the liquidation plan provide for the liquidation of assets and payment of shareholders in one year. If the liquidation is projected to require more than one year, an explanation must be included in the liquidation plan.

Published Notice of Liquidation

Three comments expressed concern on the requirement to publish a notice of liquidation. The comments indicate the costs of publication in larger metropolitan areas can be excessive, and since many vendors are regional or national, the publication may not reach the intended audience. These comments have merit, but a reasonable effort must be made to notify creditors when a Federal credit union is closing. A newspaper's Legal Notices section is a common source for such notifications. Notifications published in local newspapers during involuntary liquidations do generate some response.

Since creditor claims are more likely to be filed against credit unions with more complex operations, the regulation was modified to require three publications only when the assets of a liquidating credit union exceed $5 million. Credit unions with assets between $500,000 and $5 million will be required to publish only one notice, and credit unions with assets under $500,000 will not be required to publish any notice. Also, in response to comments received, time frames were established for the publication. Publication is required within seven days of the liquidation date. Mailing of the liquidation notice has been changed to within 10 days of the liquidation date. Creditors have 30 days from the liquidation date to submit claims rather than the 30 days from the date of publication as originally proposed.

Other Comments; Amendments

Several other changes were made based on comments received, questions posed or staff recommendations. The following is a summary of the changes made and responses to comments.

In response to one comment, the definition of "liquidating agent" in § 710.1(c) was changed to clarify that the party appointed need not be an individual.

Section 710.2(b) was changed by deleting "NCUA or another person". That phrase is deemed unnecessary since NCUA is covered by the definition of "liquidating agent". In response to one commenter's question, NCUA is not required to accept appointment as liquidating agent but generally would do so. This provision was also changed to provide that the agent can be appointed as soon as the board votes to present the question of liquidation to the members.

Section 710.2(c) was changed to require that either bond coverage continue or the discovery period be extended for at least four months after the final distribution of assets. This is to provide a reasonable period for the discovery of actionable claims. Due to the fact that the liquidating credit union is solvent, any recoveries would benefit the members.

Section 710.2(d) as proposed has been changed. The regional director is responsible for monitoring the progress in completing the voluntary liquidation. Financial statements are used to determine the current financial condition and determine future follow-up plans. However, rather than continue the current requirement that quarterly reports must be filed, this subsection is amended to provide that reports only need to be provided upon request.

Section 710.3(c) is amended to eliminate the requirement that the board rescind its decision to liquidate if the members fail to vote favorably. As one commenter pointed out, this requirement is unnecessary. This subsection is also changed to allow the liquidating agent as well as the board of directors to resubmit the question of liquidation to the members.

Proposed § 710.3(d) is not changed. Once the board and the membership vote to liquidate the credit union, normal operation cannot be resumed until the regional director agrees that the financial condition and management is adequate to provide a sound basis for operations. The regional director needs to evaluate continued operation in light of factors giving rise to the initial determination to seek member approval.

Section 710.4 has been changed to specifically reference share draft accounts and credit cards.

As proposed, § 710.6(a) would have eliminated the current requirement of § 710.9 to obtain regional director approval for partial distributions. In final form, § 710.6(a) will continue the regional director approval requirement. This will aid the regional director in monitoring the liquidation, assist the credit union in adhering to its liquidation plan and assure protection of the members' interests. It is also amended to provide that any partial distribution must be on a pro rata basis but allows for the exclusion of accounts less than $25.00. Payment on those accounts may be withheld until final distribution. This will allow a credit union to avoid the expense of issuing more than one payment on small accounts. However, upon conclusion of the liquidation, the total payout of all distributions must result in a pro rata distribution to all members.

Section 710.6(d) is expanded to reference state law for procedures to escheat or trustee unclaimed funds. The subsection is necessary to provide a clear understanding that state procedures apply to disbursing unclaimed funds.

Section 710.7, as proposed, has not been changed. One commenter suggested that the current records retention period of three years be maintained instead of the proposed five year period as this would impose an undue burden on the appointed custodian. The three year period was used in the current regulation (§ 710.13) because, in accordance with section 120(b)(5) of the Federal Credit Union Act (12 U.S.C. 1766(b)(5)), the corporate existence of a federal credit union continues for that period from the date of cancellation of its charter. However, section 120(c) of the Act (12 U.S.C. 1766(c)) provides that the NCUA Board can only destroy records after five years from the date of cancellation of the charter. The Board believes the same requirement should apply in all federal credit union liquidations, even for records not in its possession, and therefore the five year period is retained in this final rule. Storage of records is not believed to be an unreasonable or burdensome requirement.

Regulatory Procedures

Regulatory Flexibility Act

The Regulatory Flexibility Act requires NCUA to prepare an analysis to describe any significant impact any final regulation may have on a substantial number of small credit unions (primarily those under $1 million in assets). As this rule deals with the voluntary liquidation of all federal credit unions, it has no significant economic impact on small credit unions as ongoing, continuing concerns. Therefore, the NCUA Board has determined and certifies that the final amendment will not have a significant economic impact on a substantial numbers of small credit unions. Accordingly, the NCUA Board has determined that a Regulatory Flexibility Analysis is not required.

Paperwork Reduction Act

This final rule reduces reporting requirements by eliminating: The notice of intent to resume operations; the filing of specified reports within 20 days of the liquidation date; the filing of quarterly reports (now on an as requested basis); and the filing of schedules and final reports after final distribution. It continues the current requirements regarding: notice to the regional director of decision to liquidate; notice to members for approval; notice to regional director of membership vote; the request for approval of partial distributions; request for regional director approval to sell assets at value insufficient to pay members at par; notice to creditors; notice to regional director of commencement of final distribution; and submission of dissolution certificate.

The final rule does add the new requirement that a federal credit union prepare and submit a liquidation plan to the regional director. It also requires a federally insured credit union to notify the regional director of its decision to liquidate. These paperwork requirements will be submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act. Written comments on these requirements should be forwarded to the OMB Desk Officer at the following address: OMB Reports Management Branch, New Executive Office Building, room 3208, Washington, DC 20530, ATTN: Gary Waxman. A notice of OMB approval will be published in the **Federal Register** once it is received.

Executive Order 12612

Executive Order 12612 requires NCUA to consider the effect of its actions on state interests. The "procedures" part of this final rule applies only to federal credit unions. The regulation provides that voluntary liquidations be conducted in accordance with state law or the requirements of the state regulator. The only requirement is that the regional director be notified of any decision to liquidate a solvent federally insured state credit union, and that the regional director be provided copies of financial statements as of the month end before the decision to liquidate and a copy of any liquidation plan. The notification, financial statements, and liquidation plan are needed due to NCUA's insurance responsibilities and risk. If it appears the credit union may become insolvent during the liquidation process, NCUA could become involved, and if the liquidation progresses in a normal manner, NCUA must refund the insurance deposit. Therefore the regulation does not affect state interests.

List of Subjects in 12 CFR Part 710

Administrative practice and procedure, Credit unions, Reporting and recordkeeping requirements.

By the National Credit Union Administration Board on June 17, 1993.

Allan H. Meltzer,

Acting Secretary of the Board.

Accordingly, NCUA revises 12 CFR part 710 to read as follows:

PART 710—VOLUNTARY LIQUIDATION

Sec.
710.0 Scope.
710.1 Definitions.
710.2 Responsibility for conducting voluntary liquidation.
710.3 Approval of the liquidation proposal by members.
710.4 Transaction of business during liquidation.
710.5 Notice of liquidation to creditors.
710.6 Distribution of assets.
710.7 Retention of records.
710.8 Certificate of dissolution and liquidation.
710.9 Federally insured state credit unions.

Authority: 12 U.S.C. 1766(a), 1786, and 1787.

§ 710.0 Scope.

This part describes the requirements that must be followed to accomplish the voluntary liquidation of a Federal credit union. Federally insured state credit unions are only subject to the notification requirement provided in § 710.9; voluntary liquidation is to be accomplished in accordance with state

law or procedures established by the state regulatory authority.

§ 710.1 Definitions.

For the purpose of this part, the following definitions apply:

(a) *Voluntary liquidation* means the dissolution of a solvent Federal credit union with the assets being sold or collected, liabilities paid, and shares distributed under the direction of the board of directors or its duly appointed liquidating agent.

(b) *Liquidation date* means the date the members vote to approve liquidation.

(c) *Liquidating agent* means the person or persons, including any legally recognized entity, appointed by the board of directors to liquidate the Federal credit union.

§ 710.2 Responsibility for conducting voluntary liquidation.

(a) The board of directors shall be responsible for conserving the assets, for expediting the liquidation, and for equitable distribution of the assets to the members.

(b) After voting to present the question of liquidation to the members, the board of directors may appoint a liquidating agent and delegate all or part of the board's responsibility to such agent and authorize reasonable compensation for the services provided.

(c) The board of directors shall determine that the liquidating agent and all persons who handle or have access to funds of the Federal credit union are adequately covered by surety bond and that either such coverage remains in effect, or the discovery period is extended, for at least four months after final distribution of assets.

(d) Within three days after the decision of the board of directors to submit the question of liquidation to the members, the Regional Director will be notified in writing, setting forth in detail the reasons for the proposed action. A balance sheet and income statement as of the previous month-end will be included with the notification. During the liquidation process, financial statements will be submitted to the Regional Director as requested.

(e) Promptly after the decision to present the question of liquidation to the members, the board of directors or liquidating agency shall develop a written plan for the liquidation of the assets and payment of shares (liquidation plan). The plan should provide for the liquidation of assets and payment of creditors and shareholders within one year of the liquidation date. If the liquidation period is projected to exceed one year, an explanation must be provided in the liquidation plan. A copy of the liquidation plan will be mailed to the Regional Director within 30 days of the date the board of directors votes to present the question of liquidation to the members.

§ 710.3 Approval of the liquidation proposal by members.

(a) When the board of directors decides to present the question of liquidation to the members, it shall act promptly to obtain the members' approval. The members shall be given advance notice of the membership meeting at which the liquidation proposal is to be submitted, in accordance with the provisions of Article V of the Federal Credit Union Bylaws. The notice shall:

(1) Inform members that they have the right to vote on the liquidation proposal in person at the membership meeting called for that purpose or by written ballot to be received no later than the time and date indicated on the notice.

(2) Include or be accompanied by a ballot for the liquidation proposal.

(b) The liquidation proposal must be approved by the affirmative vote of a majority of the Federal credit union members who vote on the proposal.

(c) If the members do not approve the liquidation, the board of directors, or if delegated the authority, the liquidating agent, must decide within seven days whether the Federal credit union should resume operations or, if good cause exists, to resubmit the question of liquidation to the members.

(d) If the members approve the liquidation, neither the members nor the board of directors may rescind the decision to liquidate unless the Regional Director concurs in the recision.

(e) The Regional Director will be notified in writing of the results of the membership vote on the voluntary liquidation proposal within three days of the date of the vote.

§ 710.4 Transaction of business during liquidation.

(a) Immediately upon decision by the board of directors to present the question of liquidation to the members, payments on shares, withdrawal of shares (except for transfer of shares to loans and interest), transfer of shares to another share account, granting of loans, and making of investments other than short-term investments shall be suspended pending action by the members on the proposal to liquidate. Collection of loans and interest, payment of necessary expenses, clearing of share drafts and credit card charges will continue.

(b) Upon approval of the members, payments on shares, withdrawal of shares (except for transfer of shares to loans and interest), transfer of shares to another share account, granting of loans, and making of investments other than short-term investments shall be discontinued permanently. Collection of loans and interest and payment of necessary expenses will continue during the period of liquidation. Members will be notified to discontinue the use of share drafts and credit cards, and items will not be cleared 15 days from the liquidation date.

(c) Approval of the Regional Director must be obtained prior to consummating any sale of assets which would not provide sufficient funds to pay shareholders at par.

§ 710.5 Notice of liquidation to creditors.

(a) When approval for liquidation is obtained from the members, the board of directors or the liquidating agent shall cause notice to be given to creditors to present their claims.

(1) Federal credit unions with assets in excess of $5 million as of the month end prior to the liquidation date shall publish the notice once a week in each of three successive weeks, in a newspaper of general circulation, in each county in which the Federal credit union maintains an office or branch for the transaction of business on the liquidation date. The first notice shall be published within seven days of the liquidation date.

(2) Federal credit unions with assets in excess of $500,000 but less than $5 million as of the month end prior to the liquidation date shall publish the notice once, in a newspaper of general circulation, in each county in which the Federal credit union maintains an office or branch for the transaction of business on the liquidation date. The notice shall be published within seven days of the liquidation date.

(3) Federal credit unions with assets less than $500,000 as of the month end prior to the liquidation date shall not be required to publish the notice.

(b) Within 10 days of the liquidation date, a copy of the notice of liquidation shall be mailed to all creditors reflected on the records of the Federal credit union.

(c) Creditors shall be provided 30 days from the liquidation date to submit their claims.

§ 710.6 Distribution of assets.

(a) With the approval of the regional director, a partial pro rata distribution of the Federal credit union's assets may be made to its members from cash funds available on authorization by the board of directors or liquidating agent. Payment of a partial distribution may

exclude member accounts of less than $25.00.

(b) After all assets of the Federal credit union have been converted to cash or found to be worthless and all loans and debts owing to it have been collected or found to be uncollectible and all obligations of the Federal credit union have been paid, with the exception of shares due its members, the books shall be closed and the pro rata distribution to the members shall be computed. The computation shall be based on the total amount in each share account.

(c) Promptly after the pro rata distribution to members has been computed, checks shall be drawn for the amounts to be distributed to each member. The checks shall be mailed to the members at their last known address or handed to them in person.

(d) Unclaimed share accounts, unpaid claims, and unpaid claims of members or creditors who failed to cash their final distribution checks shall be trusteed or escheated in accordance with the laws of the state in which the member or creditor resides.

(e) The Regional Director will be notified in writing within three days when the final distribution of assets to the members is started.

§ 710.7 Retention of records.

(a) The board of directors or liquidating agent shall appoint a custodian for the Federal credit union's records which are to be retained after the final distribution of assets.

(b) All records of the liquidated Federal credit union necessary to establish that creditors were paid and that assets were equitably distributed to the members shall be retained by the custodian for a period of five years following the date of charter cancellation.

§ 710.8 Certificate of dissolution and liquidation.

Within 120 days after the final distribution of assets to members is started, a duly executed Certificate of Dissolution and Liquidation shall be filed with the Regional Director.

§ 710.9 Federally insured state credit unions.

A federal insured state credit union will notify the Regional Director in writing within three days after the board of directors' decision to liquidate is made. A balance sheet and income statement as of the previous month-end and a copy of any liquidation plan will be included with the notification to the Regional Director.

[FR Doc. 93-15518 Filed 6-30-93; 8:45 am]
BILLING CODE 7535-01-M

SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 239 and 249

[Release Nos. 33-7004; 34-32531]
[File No. S7-16-93]

RIN 3235-AF83

International Series Release No. 556; Amendments to the Multijurisdictional Disclosure System for Canadian Issuers

AGENCY: Securities and Exchange Commission.

ACTION: Final Amendments to Forms.

SUMMARY: The Securities and Exchange Commission (the "Commission") is adopting amendments to Form F-10 under the Securities Act of 1933 and Form 40-F under the Securities Exchange Act of 1934 in order to continue the requirement that financial statements presented in filings on such forms include a reconciliation to U.S. generally accepted accounting principles ("GAAP"). These amendments are being adopted in light of the Commission's experience with the multijurisdictional disclosure system and should continue to facilitate transnational capital formation.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Paul M. Dudek, (202) 272-3246, Office of International Corporate Finance, Division of Corporation Finance, Securities and Exchange Commission, Washington, DC. 20549.

SUPPLEMENTARY INFORMATION:

I. Amendments to Forms F-10 and 40-F

A. Discussion of Amendments

Forms F-10 [1] and 40-F [2] were adopted on June 21, 1991 as part of the multijurisdictional disclosure system ("MJDS") for Canadian issuers.[3] On April 28, 1993, the Commission proposed for comment certain amendments to the MJDS,[4] including amendments to Forms F-10 and 40-F which would continue the requirement that financial statements presented in filings on such forms include a reconciliation to U.S. GAAP. These amendments to Forms F-10 and 40-F are being adopted today as proposed. The Commission is rescinding the provisions of Forms F-10 and 40-F that would eliminate the requirement for reconciliation of the financial statements to U.S. GAAP in filings made on and after July 1, 1993.

B. Discussion of Comments and Other Matters

The Commission received six comment letters on the proposed amendments.[5] In addition, since the amendments were proposed, the Commission released a staff report regarding reconciliation of financial statements.[6] This report indicates that, based on the frequency, size and general nature of reconciling items reported by Canadian issuers in filings with the Commission, there continue to be significant differences in accounting principles and practices at this time between Canadian GAAP and U.S. GAAP.

Comments received recommended that, at least to some extent, the Commission should not retain the current reconciliation requirements under Form F-10 and Form 40-F. The Commission has considered these comments and continues to believe that there are qualitative and quantitative differences between Canadian GAAP and U.S. GAAP that materially affect reported financial position and results of operations and related trend information which warrant retention of the currently existing reconciliation requirements under Forms F-10 and 40-F.

Two commenters suggested that Form F-10 should require reconciliation in accordance with Item 17 of Form 20-F rather than Item 18 of Form 20-F,[7] and that such reconciliation should apply only to annual financial statements and

[1] 17 CFR 239.40.

[2] 17 CFR 249.240f.

[3] Securities Act Release No 6902 (June 21, 1991) 56 FR 30036.

[4] Securities Act Release No 6997 (April 28, 1993) 58 FR 26442.

[5] See file no. S7-16-93. A report by the staff of the Ontario Securities Commission, "Study of Differences between Canadian and United States Generally Accepted Accounting Principles" dated May 1993 has also been included in the public comment file.

[6] "Survey of Financial Statement Reconciliations by Foreign Registrants" dated May 1, 1993 prepared by the Commission's Division of Corporation Finance. This report has also been included in the public comment file.

[7] Item 17 of Form 20-F (17 CFR 249.220f) permits an issuer to use its financial statements that are prepared on a comprehensive basis other than U.S. GAAP, but requires quantification of the material differences in the principles, practices and methods of accounting. An issuer complying with Item 18 of Form 20-F must satisfy the requirements of Item 17 and also must provide all other information required by U.S. GAAP and Regulation S-X (17 CFR 210 *et seq.*)

not to financial statements for interim periods after the end of the most recent fiscal year. The additional disclosures required under Item 18 of Form 20–F are warranted where a foreign issuer is offering common equity and non-investment grade securities to the public. Further, if financial information for the most recent fiscal period were not required to be reconciled, investors may not be able to base investment decisions upon the most recently available financial information presented on a comparable basis to the annual reconciled financial information.

II. Regulatory Flexibility Act Certification

Pursuant to section 605(b) of the Regulatory Flexibility Act [5 U.S.C. 605], at the time the Commission issued its release proposing the amendments to Forms F–10 and 40–F being adopted hereby, the Chairman of the Commission certified that such amendments will not have a significant impact on a substantial number of small entities. That certification, including the reasons therefor, was attached as an appendix to such release and was published in the **Federal Register**.

III. Cost-Benefit Analysis

No specific data were provided in response to the Commission's request regarding the costs and benefits of the amendments to Forms F–10 and 40–F. However, three commenters indicated that Canadian issuers incur additional costs or additional burdens in complying with the reconciliation requirement under these forms. It appears that the amendments will provide benefits, including continued investor access to financial information relating to Canadian companies which is comparable to financial information relating to U.S. companies. The Commission believes that any costs relating to the reconciliation requirements under Forms F–10 and 40–F are outweighed by these benefits.

IV. Effective Date

The effective date of these amendments shall be July 1, 1993. Pursuant to 5 U.S.C. 553(d), the Commission finds that good cause exists for making the revisions effective less than 30 days after publication in the **Federal Register**. The current requirement that financial statements presented in filings on Forms F–10 and 40–F include a reconciliation to U.S. GAAP will terminate on July 1, 1993. If the revisions adopted today continuing the reconciliation requirement were made effective later than July 1, 1993, there would be a brief period of time in which this requirement would not apply. The resulting discontinuity in the applicable regulatory requirements would be likely to cause confusion and would raise concerns about investor protection.

Because issuers using Forms F–10 and 40–F are currently required to reconcile to U.S. GAAP, the Commission does not believe that extending the reconciliation requirement, effective July 1, 1993, will cause hardship to affected issuers or require any period of adjustment. Further, issuers and other interested parties have been on notice since the Commission's issuance of the proposing release on April 28, 1993, of the possible extension of the reconciliation requirement beyond July 1.

V. Statutory Bases

Forms F–10 and 40–F are being amended by the Commission pursuant to sections 6, 7, 8, 10 and 19(a) of the Securities Act of 1933, and sections 3(b), 4A, 12, 13, 14, 15, 16 and 23 of the Securities Exchange Act of 1934.

List of Subjects in 17 CFR Parts 239 and 249

Reporting and recordkeeping requirements; Securities.

Text of Proposed Amendments

In accordance with the foregoing, title 17, chapter II of the Code of Federal Regulations is amended as follows:

PART 239—FORMS PRESCRIBED UNDER THE SECURITIES ACT OF 1933

1. The authority citation for Part 239 continues to read in part as follows:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 77sss, 78c, 78l, 78m, 78n, 78o(d), 78w(a), 78ll(d), 79e, 79f, 79g, 79j 79l, 79m, 79n, 79q, 79t, 80a-8, 80a-29, 80a-30 and 80a-37 unless otherwise noted.

* * * * *

2. By amending Form F–10 (§ 239.40) by revising Item 2 under Part I to read as follows:

Note: The text of Form F–10 does not and the amendments will not appear in the Code of Federal Regulations.

Form F–10

* * * * *

PART I—INFORMATION TO BE DELIVERED TO OFFEREES OR PURCHASERS

* * * * *

Item 2. *Additional Information.*

The following information also shall be provided to offerees as part of the prospectus.

Financial Statements.

Any financial statements included in the home jurisdiction document must be reconciled to U.S. GAAP as required by Item 18 of Form 20–F under the Exchange Act.

* * * * *

PART 249—FORMS, SECURITIES EXCHANGE ACT OF 1934

3. The authority citation for Part 249 continues to read in part as follows:

Authority: 15 U.S.C. 78a, et seq., unless otherwise noted.

* * * * *

4. By amending Form 40–F (§ 249.240f) by revising paragraph 2 under General Instruction C. to read as follows:

Note: The text of Form 40–F does not and the amendments will not appear in the Code of Federal Regulations.

Form 40–F

* * * * *

General Instructions

C. Compliance With Auditor Independence and Reconciliation Requirements

* * * * *

(2) Any financial statements, other than interim financial statements, included in this Form by registrants registering securities pursuant to section 12 of the Exchange Act or reporting pursuant to the provisions of section 13(a) or 15(d) of the Exchange Act must be reconciled to U.S. GAAP as required by Item 17 of Form 20–F under the Exchange Act, unless this Form is filed with respect to securities that would be eligible for registration under the Securities Act on Form F–9, in which case no such reconciliation is required, or unless this Form is filed with respect to a reporting obligation under Section 15(d) that arose solely as a result of a filing made on Form F–7, F–8, F–9 or F–80, in which case no such reconciliation is required.

* * * * *

Dated: June 28, 1993.

By the Commission.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 93–15687 Filed 6–30–93; 8:45 am]

BILLING CODE 8010–01–M

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Housing—Federal Housing Commissioner

24 CFR Part 203

[Docket No. R-93-1590; FR-3103-F-01]

RIN No. 2502-AF51

Waiver of Title—Mortgages or Property Formerly Held by Secretary

AGENCY: Office of the Assistant Secretary for Housing-Federal Housing Commissioner, HUD.

ACTION: Final rule.

SUMMARY: This rule amends HUD's regulation relating to the waiver of title requirements by the Secretary in cases where a single family mortgage or property was formerly held by the Secretary. The regulation is amended so that HUD is not required to accept title to properties that are encumbered by prior judgment liens emanating from its purchasers.

EFFECTIVE DATE: August 2, 1993.

FOR FURTHER INFORMATION CONTACT: John Coonts, Director, Single Family Development Division, room 9272, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410, telephone (202) 708-2700. A telecommunications device for deaf persons (TDD) is available at (202) 708-4594. (These are not toll-free telephone numbers.)

SUPPLEMENTARY INFORMATION: Paragraph (b) of 24 CFR 203.390 deals with mortgages which finance the sales of Secretary-held properties. Paragraph (b)(1) currently provides that if a property held by the Secretary is sold and the Secretary insures a mortgage financing the sale, and the mortgage is later conveyed to the Secretary, he or she will not object to title by reason of any lien or other adverse interest that was senior to the mortgage on the date the mortgage was filed for record. Paragraph (b)(2) provides that the Secretary will accept an assignment of a mortgage executed in connection with the sale of property by HUD, where the mortgagee is unable to complete foreclosure because of a defect in the mortgage instrument, a defect in the mortgage transaction, or a defect in title which existed at or before the time the mortgage was filed for record. In such instances, the Secretary will not object to title by reason of any such defect.

Section 203.390 concerns purchase money mortgages financing the sale of Secretary-held properties. The titles to these properties are in a special category because of the operation of that section. The section assures mortgagees that if the property that secures an insured mortgage is one previously purchased from the Secretary and later conveyed to HUD in connection with a claim, then the Secretary will not object to the title "by reason of any lien or other adverse interest that was senior to the mortgage on the date such mortgage was filed for record."

Section 203.390 was made a part of HUD's regulations to facilitate the sales of Secretary-held properties financed by FHA-insured mortgages. The reason the regulation is able to give mortgagees this assurance as to title is the fact that when HUD acquires a property in connection with a mortgage insurance claim, the mortgagee must furnish title evidence to show that HUD is receiving good, marketable title to the conveyed property. This is required by 24 CFR 203.366. HUD creates no title defects during its tenure in title. Consequently, it may be safely assumed that the title that is conveyed by HUD to its purchaser is good and marketable. Additionally, a mortgage given by HUD's purchaser to finance the property sale would normally be a first lien of record because of the operation of state laws giving priority to purchase money mortgages.

This purchase money mortgage priority is of vital importance because of the effect of recorded judgment liens. A judgment lien properly recorded in a jurisdiction attaches immediately to all property owned of record in that jurisdiction by the judgment debtor. Consequently, whenever a prospective mortgagee is about to make a mortgage loan, it must first search the judgment records in the jurisdiction, to make sure that there are no recorded judgments against the mortgagor that are or will be attached to the property that is to be mortgaged and that will come ahead of the mortgage when it is recorded.

In part as a means of facilitating the financing of property sales, jursidictions have adopted laws known as the purchase money mortgage priority, hereinafter referred to as the "pump." The "pump" operates in the following manner: A mortgage or deed of trust which is given to secure the purchase of land and executed simultaneously with the conveyance to the mortgagor will have priority over any judgments which have been taken and are of record against the mortgagor before the conveyance—whether the mortgage is given by the vendee to the vendor himself or to a lender who advances the purchase money to the vendee.

It can easily be deduced that § 203.390 was adopted as a regulation only on the assumption that all jurisdictions had some form of a "pump" which would protect the priority of the purchase money mortgage, and indirectly proptect HUD. Standard authorities in real estate law seem to state that in all jurisdictions, a purchase money mortgage has priority (by virtue of statute or judicial decision) over all other private liens against the vendee. HUD knows that the titles to properties that it sells are good and marketable because it has been provided with title evidence showing this in the prior claim. HUD also knows that it does nothing to create title defects during the time that it is in title. What HUD cannot know, and what HUD has no control over, is whether it purchasers have any outstanding judgment lien recorded against them at the time these purchasers are taking title and giving back purchase money mortgages. This is why a "pump" is so essential for the proper operation of § 203.390. If the jurisdiction has a "pump," the purchase money mortgage that finances the sale of the Secretary-held property *must* be a first lien, even though the purchaser may have outstanding thousands of dollars worth of recorded judgment liens.

However, the Department recently learned that there are at least two Western states that have no "pump" laws. Furthermore, there are a few states that have only modified forms of "pump" laws that allow certain types of liens recorded against vendees to prime purchase money mortgages. In these states, HUD could be conveying marketable titles, but if the purchasers have judgment liens of record against them, these liens would be considered superior to the insured purchase money mortgages given to finance the sales. In effect, the FHA-insured mortgages would be second liens. The current § 203.390 would prevent HUD from objecting to the existence of the prior lien, and HUD would be required to pay mortgage insurance claims in full, even though it would not be receiving good title to the property being conveyed to it in the claim. If the prior judgment lien were large enough, the insured mortgage could be completely wiped out. Section 203.390(b)(2) would probably require HUD to accept an assignment of the mortgage if the prior judgment lien prevented the mortgagee from foreclosing on the mortgage.

The lack of "pump" protection in these few states makes it necessary to revise § 203.390(b), as is done in this rule, to exclude from coverage under its waiver provisions liens which have

already been recorded against the mortgagor. In these states, HUD cannot effectively prevent these liens from priming purchase money mortgages, and consequently cannot be expected to waive their effect.

This revision should not adversely affect the interests of any mortgagee or lender. Nor is it likely to cause mortgagees to make any changes in their existing loan closing and settlement procedures. Mortgagees in states like Arizona and Colorado that lack "pump" laws must be acutely aware that their jurisdictions lack "pump" protection, and of the title problems this can cause. Consequently, in order to be able to make the "first lien" certifications that are required for all FHA-insured loans, and in order to protect their purchase money mortgages, lenders in these states, when closing loans, must routinely check on the judgment lien status of all of the purchasers. If a prospective purchaser is found to have outstanding judgment liens recorded against him that would be superior to purchase money mortgage, the recordation of the deed and mortgage would be postponed until the matter could be resolved.

This routine examination of the judgment lien status of purchasers probably explains why the Department has never experienced any losses in connection with the waiver provisions of § 203.390(b) as it is currently written. Nevertheless, the revision needs to be made to preclude any such losses in the future. If a mortgagee were to record a mortgage which in fact is in second position to judgment liens against a purchaser, the only ground HUD might have to disallow the mortgage insurance claim would be on the basis of the mortgagee's having committed fraud or material misrepresentation in having the loan insured. Disallowance of the insurance claim would be dependent on HUD's showing that the mortgagee knew about the prior liens, originated the mortgage, and made the certification to HUD in spite of them. This possible recourse clearly does not provide HUD with much protection.

To provide this protection it is necessary to revise § 203.390(b), as is done in this rule, to exclude from coverage under its waiver provisions liens that have already been recorded against the mortgagor.

Nature of Rule Making

It is the policy of the Department to publish rules for public comment before developing a rule for effect. However, in a particular case where notice and public comment are not required by statute, the procedure for advance public comment may be omitted if the Department determines it is impracticable, unnecessary or contrary to the public interest. In this case, the Department finds that the solicitation of public comment before issuing this rule for effect is unnecessary and would serve no public purpose. The rule will not adversely affect the interests of any mortgagee, mortgagor or lender, nor should it require any changes in existing loan closing and settlement procedures. The rule essentially provides HUD with protection against a negligent examination of the judgment lien status of purchasers in those states where such examinations are necessary.

Procedural Matters

This rule does not constitute a "major rule" as that term is defined in section 1(d) of the Executive Order 12291 on Federal Regulations issued by the President on February 17, 1981. An analysis of the rule indicates that it does not (1) have an annual effect on the economy of $100 million or more; (2) cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (3) have a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

In accordance with 5 U.S.C. 605(b) (the Regulatory Flexibility Act), the undersigned hereby certifies that this rule does not have a significant economic impact on a substantial number of small entities. The rule would apply only in very specific and limited situations and any entities that may be affected by the rule will have had a more than adequate opportunity to protect themselves.

This rule was listed as item number 1459 in the Department's Semiannual Agenda of Regulations published on April 26, 1993 (58 FR 24382, 24413), in accordance with Executive Order 12291 and the Regulatory Flexibility Act.

In accordance with 40 CFR 1508.4 of the regulations of the Council on Environmental Quality and 24 CFR 50.20(k) of the HUD regulations, the policies and procedures contained in this rule relate only to internal administrative procedures whose content does not constitute a development decision nor affect the physical conditions of project areas or building sites, and, therefore, are categorically excluded from the requirements of the National Environmental Policy Act.

Executive Order 12612, Federalism

The General Council, as the Designated Official under section 6(a) of Executive Order 12612, Federalism, has determined that the policies contained in this rule will not have Federalism implications and, thus, are not subject to review under the Order. The rule does not change in any way existing relationships between HUD, the states and local governments.

Executive Order 12606, The Family

The General Council, as the Designated Official under Executive Order 12606, The Family, has determined that this rule would not have potential significant impact on family formation, maintenance, and general well-being, and, thus, is not subject to review under the Order. The rule is technical in nature. It relates solely to the acceptance by the Secretary of mortgages on property formerly held by the Secretary.

The Catalog of Federal Domestic Assistance program number is 14.117.

List of Subjects in 24 CFR Part 203

Hawaiian Natives, Home improvement, Indians—lands, Loan programs—housing and community development, Mortgage insurance, Reporting and recordkeeping requirements, Solar energy.

Accordingly, 24 CFR part 203 is amended as follows:

PART 203—SINGLE FAMILY MORTGAGE INSURANCE

1. The authority citation for 24 CFR part 203 is revised to read as follows:

Authority: 12 U.S.C. 1709, 1710, 1715b; in addition, subpart C is also issued under 12 U.S.C. 1715u.

2. Paragraphs (b) of § 203.390 is revised to read as follows:

§ 203.390 Waiver of title—mortgages or property formerly held by the Secretary.

* * * * *

(b) *Property sold by the Secretary.* (1) If a property held by the Secretary is sold by the Secretary who also insures a mortgage financing the sale, and the mortgage is later reassigned to the Secretary or the property covered by the mortgage is later conveyed to the Secretary, the Secretary will not object to title by reason of any lien or other adverse interest arose from a lien or interest that had already been recorded against the mortgagor.

(2) The Secretary will accept an assignment of a mortgage executed in connection with the sale of property by the Secretary, where the mortgagee is

unable to complete foreclosure because of a defect in the mortgage instrument, a defect in the mortgage transaction, or a defect in title which existed at or prior to the time the mortgage was filed for record, except where the defect arose from a lien or interest that had already been recorded against the mortgagor on the date that the mortgage was filed for record. Except for the case of a lien or interest that had already been recorded against the mortgagor, the Secretary will not object to title by reason of any of the above defects.

Dated: June 17, 1993.

Nicholas P. Retsinas,

Assistant Secretary for Housing-Federal Housing Commissioner.

[FR Doc. 93-15541 Filed 6-30-93; 8:45 am]

BILLING CODE 4210-27-M

DEPARTMENT OF JUSTICE

Office of the Attorney General

28 CFR Part 0

[Attorney General Order No. 1751-93]

Delegation of Authority to Settle Certain Claims Against the Drug Enforcement Administration

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: This rule delegates to the Administrator of the Drug Enforcement Administration (DEA) the authority to settle certain personal injury or property damage claims arising out of the activities of DEA investigative and law enforcement personnel. This rule is enacted to improve the efficiency of the Department of Justice.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Dennis F. Hoffman, Chief Counsel, Drug Enforcement Administration, Washington, DC 20537 (202) 307-8085.

SUPPLEMENTARY INFORMATION: Pursuant to 31 U.S.C. 3724, the Attorney General is authorized to settle claims, for not more than $50,000.00 in any one case, for personal injury or property damage "caused by an investigative or law enforcement officer * * * who is employed by the Department of Justice acting within the scope of employment," which cannot be paid under the Federal Tort Claims Act, 28 U.S.C. 2401(b), 2671-2680. In order to facilitate the settlement of such claims arising out of the actions of DEA personnel, the authority to settle such claims is being delegated to the Administrator of the DEA.

This rule relates to the internal management of the Department of Justice. Therefore, pursuant to 5 U.S.C. 553, it is exempt from the notice and comment requirements of the Administrative Procedure Act and may be effective less than 30 days after publication in the **Federal Register**.

Further, since this rule relates to internal agency management, it is exempt from the provisions of Executive Order 12291. As required by the Regulatory Flexibility Act, it is hereby certified that this rule will not have a significant impact on small business entities. With respect to Executive Order 12612, it is certified that this rule will have no Federalism impact. The delegation of claims settlement authority directly to DEA will facilitate the resolution of claims presented by the public.

List of Subjects in 28 CFR Part 0

Authority delegation (Government agencies), Government employees, Organization and functions (Government agencies), Whistleblowing.

For the reasons set forth in the preamble, subpart R of 28 CFR part 0 is amended as follows:

PART 0—ORGANIZATION OF THE DEPARTMENT OF JUSTICE

1. The authority citation for part 0 continues to read as follows:

Authority: 5 U.S.C. 301; 28 U.S.C. 509, 510, 515-519.

2. Section 0.103a is added to read as follows:

§ 0.103a Delegations respecting claims against the Drug Enforcement Administration.

(a) The Administrator of DEA is authorized to exercise the power and authority vested in the Attorney General under the Act of December 7, 1989, Public Law 101-203, 103 Stat. 1805 (31 U.S.C. 3724) with regard to claims thereunder arising out of the lawful activities of DEA personnel in an amount not to exceed $50,000.00 in any one case.

(b) Notwithstanding the provisions of 28 CFR 0.104, the Administrator of DEA is authorized to redelegate the power and authority vested in him in paragraph (a) of this section to the Chief Counsel of DEA and the Chief Counsel's designee within the Office of Chief Counsel. This authority shall not be further redelegated below the Associate Chief Counsel level.

Dated: June 18, 1993.

Janet Reno,

Attorney General.

[FR Doc. 93-15059 Filed 6-30-93; 8:45 am]

BILLING CODE 4410-01-M

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28 CFR Part 55

[Attorney General Order No. 1752-93]

Amendment to the Attorney General's Minority Language Guidelines; New Coverage Determinations Under the Voting Rights Language Assistance Act of 1992

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: This rule updates the Appendix to the Attorney General's interpretive guidelines under the minority language provisions of the Voting Rights Act to reflect the enactment of the Voting Rights Language Assistance Act of 1992 and the coverage determinations of the Director of the Census pursuant to that act. It also makes minor changes in the text of the guidelines to conform them to the new enactment and determinations. It does not reflect any change in the Attorney General's interpretation of the substantive requirements of the minority language provisions of the Voting Rights Act.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: David H. Hunter, Attorney, Voting Section, Civil Rights Division, Department of Justice, P.O. Box 66128, Washington, DC 22035-6128, 202-307-2898.

SUPPLEMENTARY INFORMATION: Pursuant to the Voting Rights Language Assistance Act of 1992 (the "1992 amendments"), Public Law 102-344, 106 Stat. 921, the Director of the Census published in the **Federal Register** on September 18, 1992, new determinations of coverage under section 203(b) of the Voting Rights Act of 1965, as amended, 42 U.S.C. 1973aa-1a(b). 57 FR 43213. This amendment conforms the Attorney General's minority language interpretive guidelines, 28 CFR part 55, to the new determinations of coverage and to the changes made in the Voting Rights Act by the 1992 amendments.

Section 203 of the Voting Rights Act, which requires covered jurisdictions to use minority languages in the electoral process, was added to the Voting Rights Act in 1975 and extended in 1982. The 1992 amendments extend section 203 until August 6, 2007, and expand the section's coverage formula.

Section 55.6 of these guidelines has been rewritten to reflect the altered coverage formula. The Appendix, which lists jurisdictions covered under the Voting Rights Act's minority language requirements, has been revised to reflect the determinations of the Director of the Census under the new formula, and minor changes have been made in other sections of these guidelines.

Coverage

As enacted in 1975, section 203 mandated the coverage of jurisdictions in which more than 5 percent of the citizen voting age population were members of a single language minority group and in which the illiteracy rate of the language minority group members was higher than the national illiteracy rate. This formula was retained in 1982, but the determinations made pursuant to the 1982 amendments were to include as members of a language minority group only those persons "who do not speak or understand English adequately enough to participate in the electoral process * * *." Under the 1992 amendments, this limitation is now part of section 203. The explanation of the 5 percent criterion (which includes two alternative approaches) has been simplified in § 55.6(a) and now is described as follows:

(1) *Political subdivision approach. A political subdivision is covered if—*

(i) More than 5 percent of its voting age citizens are members of a single language minority group and are limited-English proficient, and

(ii) The illiteracy rate of such language minority citizens in the political subdivision is higher than the national illiteracy rate.

(2) *State approach.* A political subdivision is covered if—

(i) It is located in a state in which more than 5 percent of the voting age citizens are members of a single language minority and are limited-English proficient;

(ii) The illiteracy rate of such language minority citizens in the state is higher than the national illiteracy rate; and

(iii) Five percent or more of the voting age citizens of the political subdivision are members of such language minority group and are limited-English proficient.

The 1992 amendments added two bases for coverage, one based on the number rather than the percentage of language minority group members, and the other based on the presence of Indian reservations satisfying certain criteria. The new bases are described as follows in § 55.6(a):

(3) *Numerical approach.* A political subdivision is covered if—

(i) More than 10,000 of its voting age citizens are members of a single language minority group and are limited-English proficient, and

(ii) The illiteracy rate of such language minority citizens in the political subdivision is higher than the national illiteracy rate.

(4) *Indian reservation approach.* A political subdivision is covered if there is located within its borders all or any part of an Indian reservation—

(i) In which more than 5 percent of the voting age American Indian or Alaska Native citizens are members of a single language minority group and are limited-English proficient, and

(ii) The illiteracy rate of such language minority citizens is higher than the national illiteracy rate.

Additional definitions used in coverage determinations provided by the 1992 amendments have been added to § 55.6(b).

Other Changes

The changes made in §§ 55.1, 55.7, 55.17, and 55.20 are self-explanatory. The change in § 55.13(b) eliminates a misleading reference.

Absence of Comment Period

Because this revision of the Attorney General's minority language guidelines only conforms the guidelines to the changes effected by the 1992 amendments and to the determinations of the Director of the Census of coverage under section 203(b), which under the terms of that section are not subject to judicial review, and makes other minor technical changes, it is an interpretive rule, and therefore is published without notice. Under § 55.24, comments and suggestions on these guidelines are welcome at any time.

Rulemaking Requirements

Under the definition of section 1(b) of E.O. 12291, this amendment does not constitute a major rule. Accordingly, a regulatory impact analysis has not been prepared. Because this amendment is excepted under 5 U.S.C. 553(b), a final regulatory flexibility analysis is not required under 5 U.S.C. 604. This rule does not have federalism implications warranting the preparation of a Federalism Assessment in accordance with section 6 of E.O. 12612.

List of Subjects in 28 CFR Part 55

Administrative practice and procedure, Civil rights, Elections, Voting rights.

Dated: June 18, 1993.

Janet Reno,

Attorney General.

Accordingly, part 55 of title 28 of the Code of Federal Regulations is amended as set forth below.

PART 55—IMPLEMENTATION OF THE PROVISIONS OF THE VOTING RIGHTS ACT REGARDING LANGUAGE MINORITY GROUPS

1. The authority citation for part 55 continues to read as follows:

Authority: 5 U.S.C. 301; 28 U.S.C. 509, 510; 42 U.S.C. 1973b, 1973j(d), 1973aa–1a, 1973aa–2.

§ 55.1 [Amended]

2. Section 55.1 is amended in the definition of "Act" by removing, following the words "89 Stat. 400,", the word "and" and by adding, following the words "96 Stat. 131,", the words "and the Voting Rights Language Assistance Act of 1992, Public Law 102–344, 106 Stat. 921,".

3. Section 55.6 is revised to read as follows:

§ 55.6 Coverage under section 203(c).

(a) *Coverage formula.* There are four ways in which a political subdivision can become subject to section 203(c).[2]

(1) *Political subdivision approach.* A political subdivision is covered if—

(i) More than 5 percent of its voting age citizens are members of a single language minority group and are limited-English proficient; and

(ii) The illiteracy rate of such language minority citizens in the political subdivision is higher than the national illiteracy rate.

(2) *State approach.* A political subdivision is covered if—

(i) It is located in a state in which more than 5 percent of the voting age citizens are members of a single language minority and are limited-English proficient;

(ii) The illiteracy rate of such language minority citizens in the state is higher than the national illiteracy rate; and

(iii) Five percent or more of the voting age citizens of the political subdivision are members of such language minority group and are limited-English proficient.

(3) *Numerical approach.* A political subdivision is covered if—

(i) More than 10,000 of its voting age citizens are members of a single language minority group and are limited-English proficient; and

(ii) The illiteracy rate of such language minority citizens in the political subdivision is higher than the national illiteracy rate.

(4) *Indian reservation approach.* A political subdivision is covered if there is located within its borders all or any part of an Indian reservation—

(i) In which more than 5 percent of the voting age American Indian or

[2] The criteria for coverage are contained in section 203(b).

Alaska Native citizens are members of a single language minority group and are limited-English proficient; and

(ii) The illiteracy rate of such language minority citizens is higher than the national illiteracy rate.

(b) *Definitions.* For the purpose of determinations of coverage under section 203(c), *limited-English proficient* means unable to speak or understand English adequately enough to participate in the electoral process; *Indian reservation* means any area that is an American Indian or Alaska Native area, as defined by the Census Bureau for the purposes of the 1990 decennial census; and *illiteracy* means the failure to complete the fifth primary grade.

(c) *Determinations.* Determinations of coverage under section 203(c) are made with regard to specific language groups of the language minorities listed in section 203(e).

§ 55.7 [Amended]

4. Section 55.7 is amended by removing, in paragraph (b), the word "1992" and adding, in its place, the word "2007".

§ 55.13 [Amended]

5. Section 55.13 is amended by removing, in paragraph (b), the words "pursuant to section 4(f)(4)".

§ 55.17 [Amended]

6. Section 55.17 is amended by removing, following the words "are provided to", the words "less than" and adding, in their place, the words "fewer than".

§ 55.20 [Amended]

7. Section 55.20 is amended by removing, in paragraph (c) following the words "by a person of", the word "his" and adding, in its place, the words "his or her".

8. The Appendix to part 55 is revised to read as follows:

Appendix to Part 55—Jurisdictions Covered Under Sections 4(f)(4) and 203(c) of the Voting Rights Act of 1965, as Amended

[Applicable language minority group(s)]

Jurisdiction	Coverage under sec. 4(f)(4) [1]	Coverage under sec. 203(c) [2]
Alaska:	Alaskan Natives (statewide)	
Aleutians East Borough		Alaskan Natives (Eskimo).
Aleutians West Census Area		Alaskan Natives (Aleut).
Bethel Census Area		American Indian (Athapascan, Tanaina), Alaskan Natives (Eskimo).
Bristol Bay Borough		Alaskan Natives (Eskimo).
Dillingham Census Area		Alaskan Natives (Eskimo).
Kenai Peninsula Borough		Alaskan Natives (Eskimo).
Kodiak Island Borough		Alaskan Natives (Aleut, Eskimo).
Lake and Peninsula Borough		American Indian (Athapascan), Alaskan Natives (Aleut, Eskimo).
Nome Census Area		Alaskan Natives (Eskimo).
North Slope Borough		Alaskan Natives (Eskimo).
Northwest Arctic Borough		Alaskan Natives (Eskimo).
Skagway-Yakutat-Angoon Census Area		American Indian (Tlinglit).
Southeast Fairbanks Census Area		American Indian (Athapascan).
Valdez-Cordova Census Area		American Indian (Athapascan).
Wade Hampton Census Area		Alaskan Natives (Eskimo).
Yukon-Koyukuk Census Area		American Indian (Athapascan, Kuchin), Alaskan Natives (Eskimo).
Arizona:	Spanish heritage (statewide)	
Apache County	American Indian	American Indian (Apache, Navajo, Zuni).
Coconino County	American Indian	American Indian (Havasupai, Hopi, Navajo).
Gila County		American Indian (Apache).
Graham County		American Indian (Apache).
Greenlee County		Spanish heritage.
Maricopa County		American Indian (Pima, Yavapai), Spanish heritage.
Navajo County	American Indian	American Indian (Apache, Hopi, Navajo).
Pima County		American Indian (Pima), Spanish heritage.
Pinal County	American Indian	American Indian (Apache, Pima).
Santa Cruz County		Spanish heritage.
Yuma County		American Indian (Delta River Yuma, Yuma), Spanish heritage.
California:		
Alameda County		Asian American (Chinese), Spanish heritage.
Colusa County		American Indian (Wintun).
Fresno County		Spanish heritage.
Imperial County		Spanish heritage.
Inyo County		American Indian (Spanish).
Kern County		Spanish heritage.
Kings County	Spanish heritage	Spanish heritage.
Lake County		American Indian (Spanish).
Los Angeles County		Asian American (Chinese, Filipino, Japanese, Vietnamese), Spanish heritage.
Merced County	Spanish heritage	
Monterey County		Spanish heritage.
Orange County		Asian American (Vietnamese), Spanish heritage.

[Applicable language minority group(s)]

Jurisdiction	Coverage under sec. 4(f)(4) [1]	Coverage under sec. 203(c) [2]
Riverside County		Spanish heritage.
San Benito County		Spanish heritage
San Bernardino County		Spanish heritage.
San Diego County		Spanish heritage.
San Francisco County		Asian American (Chinese).
Santa Clara County		Spanish heritage.
Tulare County		Spanish heritage.
Ventura County		Spanish heritage.
Yuba County	Spanish heritage	
Colorado:		
Alamosa County		Spanish heritage.
Archuleta County		Spanish heritage.
Bent County		Spanish heritage.
Conejos County		Spanish heritage.
Costilla County		Spanish heritage.
La Plata County		American Indian (Ute).
Las Animas County		Spanish heritage.
Montezuma County		American Indian (Ute).
Otero County		Spanish heritage.
Rio Grande County		Spanish heritage.
Saguache County		Spanish heritage.
Connecticut:		
Fairfield County: Bridgeport Town		Spanish heritage.
Hartford County:		
Hartford Town		Spanish heritage.
New Britain Town		Spanish heritage.
Windham County: Windham Town		Spanish heritage.
Florida:		
Broward County		American Indian (Mikasuki, Muskogee), Spanish heritage.
Collier County	Spanish heritage	American Indian (Mikasuki).
Dade County		American Indian (Mikasuki), Spanish heritage.
Glades County		American Indian (Muskogee).
Hardee County	Spanish heritage	Spanish heritage.
Hendry County	Spanish heritage	American Indian (Mikasuki, Muskogee).
Hillsborough County	Spanish heritage	Spanish heritage.
Orange County		Spanish heritage.
Monroe County	Spanish heritage	
Hawaii:		
Honolulu County		Asian American (Filipino, Japanese).
Kauai County		Asian American (Filipino).
Maui County		Asian American (Filipino).
Idaho:		
Bannock County		American Indian (Shoshoni).
Bingham County		American Indian (Shoshoni).
Owyhee County		American Indian (Shoshoni).
Power County		American Indian (Shoshoni).
Illinois: Cook County		Spanish heritage.
Iowa: Tama County		American Indian (Fox).
Louisiana: Avoyelles Parish		American Indian (French).
Massachusetts:		
Essex County: Lawrence City		Spanish heritage.
Hampden County:		
Holyoke City		Spanish heritage.
Springfield City		Spanish heritage.
Suffolk County:		
Boston City		Spanish heritage.
Chelsea City		Spanish heritage.
Michigan:		
Allegan County: Clyde Township	Spanish heritage	Spanish heritage.
Oceana County: Colfax Township		Spanish heritage.
Saginaw County:		
Buena Vista Township	Spanish heritage	
Zilwaukee Township		Spanish heritage.
Mississippi:		
Jones County		American Indian (Choctaw).
Kemper County		American Indian (Choctaw).
Leake County		American Indian (Choctaw).
Neshoba County		American Indian (Choctaw).
Newton County		American Indian (Choctaw).
Winston County		American Indian (Choctaw).
Nevada:		
Elko County		American Indian (Shoshoni).

[Applicable language minority group(s)]

Jurisdiction	Coverage under sec. 4(f)(4) [1]	Coverage under sec. 203(c) [2]
Humboldt County		American Indian (Paiute).
New Jersey:		
Essex County		Spanish heritage.
Hudson County		Spanish heritage.
Middlesex County		Spanish heritage.
Passaic County		Spanish heritage.
Union County		Spanish heritage.
New Mexico:		
Bernalillo County		American Indian (Keres, Navajo, Tiwa), Spanish heritage.
Chaves County		Spanish heritage.
Cibola County		American Indian (Keres, Navajo, Zuni), Spanish heritage.
Colfax County		Spanish heritage.
Dona Anna County		Spanish heritage.
Eddy County		Spanish heritage.
Grant County		Spanish heritage.
Guadalupe County		Spanish heritage.
Harding County		Spanish heritage.
Hidalgo County		Spanish heritage.
Lea County		Spanish heritage.
Luna County		Spanish heritage.
McKinley County		American Indian (Navajo, Zuni).
Mora County		Spanish heritage.
Quay County		Spanish heritage.
Rio Arriba County		American Indian (Jicarilla, Navajo), Spanish heritage.
Roosevelt County		Spanish heritage.
San Juan County		American Indian (Navajo).
San Miguel County		Spanish heritage.
Sandoval County		American Indian (Jicarilla, Keres, Navajo, Towa).
Santa Fe County		Spanish heritage.
Socorro County		American Indian (Navajo), Spanish heritage.
Taos County		American Indian (Tiwa), Spanish heritage.
Torrance County		Spanish heritage.
Union County		Spanish heritage.
Valencia County		American Indian (Keres, Tiwa), Spanish heritage.
New York:		
Bronx County	Spanish heritage	Spanish heritage.
Franklin County		American Indian (Mohawk).
Kings County	Spanish heritage	Asian American (Chinese), Spanish heritage.
New York County		Asian American (Chinese), Spanish heritage.
Queens County		Asian American (Chinese), Spanish heritage.
Suffolk County		Spanish heritage.
Westchester County		Spanish heritage.
North Carolina: Jackson County	American Indian	
North Dakota:		
Benson County		American Indian (Dakota).
Eddy County		American Indian (Dakota).
Ramsey County		American Indian (Dakota).
Oklahoma: Adair County		American Indian (Cherokee).
Oregon: Malheur County		American Indian (Palute).
Pennsylvania: Philadelphia County		Spanish heritage.
Rhode Island:		
Providence County: Central Falls City		Spanish heritage.
South Dakota:		
Dewey County		American Indian (Dakota).
Gregory County		American Indian (Dakota).
Lyman County		American Indian (Dakota).
Mellette County	American Indian	
Shannon County	American Indian	
Todd County	American Indian	American Indian (Dakota).
Tripp County		American Indian (Dakota).
Ziebach County		American Indian (Dakota).
Texas	Spanish heritage (statewide)	
Andrews County		Spanish heritage.
Atascosa County		Spanish heritage.
Bailey County		Spanish heritage.
Bee County		Spanish heritage.
Bexar County		Spanish heritage.

[Applicable language minority group(s)]

Jurisdiction	Coverage under sec. 4(f)(4) [1]	Coverage under sec. 203(c) [2]
Brewster County		Spanish heritage.
Brooks County		Spanish heritage.
Caldwell County		Spanish heritage.
Calhoun County		Spanish heritage.
Cameron County		Spanish heritage.
Castro County		Spanish heritage.
Cochran County		Spanish heritage.
Comal County		Spanish heritage.
Concho County		Spanish heritage.
Crocket County		Spanish heritage.
Crosby County		Spanish heritage.
Culberson County		Spanish heritage.
Dallas County		Spanish heritage.
Dawson County		Spanish heritage.
Deaf Smith County		Spanish heritage.
Dewitt County		Spanish heritage.
Dickens County		Spanish heritage.
Dimmit County		Spanish heritage.
Duval County		Spanish heritage.
Ector County		Spanish heritage.
Edwards County		Spanish heritage.
El Paso County		American Indian (Spanish), Spanish heritage.
Floyd County		Spanish heritage.
Frio County		Spanish heritage.
Gaines County		Spanish heritage.
Garza County		Spanish heritage.
Glasscock County		Spanish heritage.
Goliad County		Spanish heritage.
Gonzales County		Spanish heritage.
Gaudalupe County		Spanish heritage.
Hale County		Spanish heritage.
Harris County		Spanish heritage.
Hays County		Spanish heritage.
Hidalgo County		Spanish heritage.
Hockley County		Spanish heritage.
Howard County		Spanish heritage.
Hudspeth County		Spanish heritage.
Irion County		Spanish heritage.
Jeff Davis County		Spanish heritage.
Jim Hogg County		Spanish heritage.
Jim Wells County		Spanish heritage.
Karnes County		Spanish heritage.
Kennedy County		Spanish heritage.
Kent County		Spanish heritage.
Kinney County		Spanish heritage.
Kleberg County		Spanish heritage.
La Salle County		Spanish heritage.
Lamb County		Spanish heritage.
Live Oak County		Spanish heritage.
Lubbock County		Spanish heritage.
Lynn County		Spanish heritage.
Martin County		Spanish heritage.
Maverick County		Spanish heritage.
McCulloch County		Spanish heritage.
McMullen County		Spanish heritage.
Medina County		Spanish heritage.
Menard County		Spanish heritage.
Midland County		Spanish heritage.
Mitchell County		Spanish heritage.
Moore County		Spanish heritage.
Nolan County		Spanish heritage.
Nueces County		Spanish heritage.
Parmer County		Spanish heritage.
Pecos County		Spanish heritage.
Polk County		Spanish heritage.
Presidio County		Spanish heritage.
Reagan County		Spanish heritage.
Reeves County		Spanish heritage.
Refugio County		Spanish heritage.
Runnels County		Spanish heritage.
San Patricio County		Spanish heritage.
Schleicher County		Spanish heritage.

[Applicable language minority group(s)]

Jurisdiction	Coverage under sec. 4(f)(4) [1]	Coverage under sec. 203(c) [2]
Scurry County		Spanish heritage.
Starr County		Spanish heritage.
Sutton County		Spanish heritage.
Swisher County		Spanish heritage.
Tarrant County		Spanish heritage.
Terrell County		Spanish heritage.
Terry County		Spanish heritage.
Tom Green County		Spanish heritage.
Travis County		Spanish heritage.
Upton County		Spanish heritage.
Uvalde County		Spanish heritage.
Val Verde County		Spanish heritage.
Victoria County		Spanish heritage.
Ward County		Spanish heritage.
Webb County		Spanish heritage.
Wharton County		Spanish heritage.
Willacy County		Spanish heritage.
Wilson County		Spanish heritage.
Winkler County		Spanish heritage.
Yoakum County		Spanish heritage.
Zapata County		Spanish heritage.
Zavala County		Spanish heritage.
Utah: San Juan County		American Indian (Navajo, Ute).
Wisconsin:		
Clark County: Curtiss Village		Spanish heritage.

[1] Coverage determinations were published at 40 FR 43746 (Sept. 23, 1975), 40 FR 49422 (Oct. 22, 1975), 41 FR 784 (Jan. 5, 1976) (corrected at 41 FR 1503 (Jan. 8, 1976)), and 41 FR 34329 (Aug. 13, 1976). Covered counties in Colorado, New Mexico, and Oklahoma have bailed out pursuant to section 4(a). See § 55.7(a) of this part.

[2] Coverage determinations were published at 57 FR 43213 (Sept. 18, 1992).

[FR Doc. 93–15462 Filed 6–30–93; 8:45 am]

BILLING CODE 4410–01–M

FEDERAL MEDIATION AND CONCILIATION SERVICE

29 CFR Part 1400

Repeal of Agency Promulgated Ethics Regulations; Correction

AGENCY: Federal Mediation and Conciliation Service.

ACTION: Final rule; correction.

SUMMARY: The Federal Mediation and Conciliation Service is correcting an error in amendments to the agency's ethics regulations. The amendments were published in the **Federal Register** on April 7, 1993 (58 FR 18007).

EFFECTIVE DATE: June 28, 1993.

FOR FURTHER INFORMATION CONTACT: Ted M. Chaskelson, Acting General Counsel, Federal Mediation and Conciliation Service, 2100 K Street, NW., Washington, DC 20427. Telephone: 202–653–5270.

SUPPLEMENTARY INFORMATION: An agency final rule to repeal certain regulations on the ethical conduct of Federal Mediation and Conciliation Service (FMCS) employees was published in the **Federal Register** on April 7, 1993 (58 FR 18007). The reason for the rule was that the provisions were superseded by Office of Government Ethics (OGE) rules establishing uniform standards of conduct and financial disclosure requirements for executive branch employees. This document adds one technical change; i.e., to delete a reference in 29 CFR 1400.735–12 which refers to § 1400.735–11, as that section will no longer exist. This change will have no substantive effect.

Correction

The following correction is made to "Repeal of Agency Promulgated Ethics Regulations" published in the **Federal Register** on April 7, 1993 (58 FR 18007). The change reflects the deletion of a reference to a section (29 CFR 1400.735–11) that the agency has repealed.

On page 18008 in the third column, instructional paragraph 7, is added as follows:

7. The introductory text to 29 CFR 1400.735–12(a)(2) is revised to read as follows:

§ 1400.735–12 Outside employment, business activities, or interests (paid or unpaid).

(a) * * *

(2) Outside employment limitations in paragraph (a)(1) of this section do not preclude an employee from:

* * * * *

Dated: June 28, 1993.

Ted M. Chaskelson,

Acting General Counsel.

[FR Doc. 93–15556 Filed 6–30–93; 8:45 am]

BILLING CODE 6732–01–M

PENSION BENEFIT GUARANTY CORPORATION

29 CFR Parts 2606, 2612, 2615, 2616, 2622, and 2623

[RIN 1212–AA40]

Miscellaneous Amendments

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Final rule.

SUMMARY: Statutes amending the Employee Retirement Income Security Act of 1974 have made changes in procedures and other rules, including timing and definitional provisions, that affect and, in some cases, override several portions of the Pension Benefit Guaranty Corporation's regulations. This rule amend parts 2606, 2612, 2615, 2622, and 2623 of the regulations to conform them to current law. It also includes other, organizational and procedural amendments and clarifying and technical changes.

EFFECTIVE DATE: August 2, 1993.

FOR FURTHER INFORMATION CONTACT: Judith Neibrief, Attorney, Office of the

General Counsel (Code 22500), Pension Benefit Guaranty Corporation, 2020 K Street, NW., Washington, DC 20006, 202–778–8850 (202–778–1958 for TTY and TDD). (These are not toll-free numbers.)

SUPPLEMENTARY INFORMATION:

Background

The Pension Benefit Guaranty Corporation ("PBGC") administers the pension plan termination insurance program under title IV of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), 29 U.S.C. 1001 *et seq.* In 1986 and 1987, respectively, Congress enacted the Single-Employer Pension Plan Amendments Act of 1986 ("SEPPAA") (Pub. L. 99–272) and the Pension Protection Act ("PPA") (which was part of the Omnibus Budget Reconciliation Act of 1987 ("OBRA '87") (Pub. L. 100–203)) with the aim of better protecting promised pension benefits and better controlling the costs of the termination insurance program for single-employer plans. Among other things, SEPPAA and the PPA amended various title IV procedures and other rules, including timing and definitional provisions, in ways that affect and, in some cases, override several portions of the PBGC's regulations (29 CFR chapter XXVI). Certain title I amendments in the Retirement Equity Act of 1984 ("REA") (Pub. L. 98–397) and the Tax Reform Act of 1986 ("TRA '86") (Pub. L. 99–514) also affect provisions of these portions of the regulations, and Congress subsequently clarified a number of previous title IV amendments in the technical corrections enacted as subtitle H of title VII of the Omnibus Budget Reconciliation Act of 1989 ("OBRA '89") (Pub. L. 101–239).

Of particular relevance here are the substantial changes in the rules for voluntary plan termination under ERISA section 4041 (29 U.S.C. 1341) and the liability incurred upon termination under ERISA sections 4062 and 4064 (29 U.S.C. 1362 and 1364). Implementation of those rules necessitated the complete revision of parts 2616 and 2617 of the PBGC's regulations (57 FR 59206, December 14, 1992). (References to part 2616 or 2617 regulations are to the new provisions.)

Prior to SEPPAA, a plan administrator was free to terminate a plan under section 4041 at any time, subject to certain procedural requirements, and upon termination of an underfunded plan, title IV protected only benefits guaranteed by the PBGC. Moreover, plan termination enabled plan sponsors to shift liability for guaranteed benefits to the insurance program because section 4062 included a net worth limitation on liability for plan underfunding.

SEPPAA restricted the right to terminate a "single-employer plan" (*i.e.*, any defined benefit plan that is not a multiemployer plan (subsection (a)(15) of ERISA section 4001 (29 U.S.C. 1301)) and expanded liability upon termination, essentially transferring back to plan sponsors liability for funding promised pension benefits when they are financially able to bear these costs. If a plan is underfunded, the "contributing sponsor" (*i.e.*, the person entitled under subsection (a) of section 404 of the Internal Revenue Code of 1986 ("Code") (26 U.S.C. 404), or that would be so entitled except for the limitations in section 404(a), to receive a deduction for required contributions) and other members of the contributing sponsor's "controlled group" (*i.e.*, a contributing sponsor and all other persons under common control with that contributing sponsor) now must demonstrate that they are in such poor financial condition, or that their single-employer plan costs have become so burdensome, that they cannot realistically continue to maintain the plan for which termination is sought.[1] In other words, "standard termination" under section 4041(b) (for sufficient plans) and "distress termination" under section 4041(c) are the exclusive means of voluntary plan termination (section 4041(a)(1)). (See ERISA section 4042 (29 U.S.C. 1342) for the PBGC's authority to institute involuntary termination proceedings.) SEPPAA also revised a number of the procedural requirements for termination under section 4041, including timing and notification requirements.

The PPA further amended title IV requirements by, among other things, increasing the benefits that, in a standard termination, a plan must be able to satisfy to all "benefit liabilities" (*i.e.*, the benefits of participants and beneficiaries under the plan, within the meaning of subsection (a)(2) of Code section 401 (26 U.S.C. 401)). The PPA also modified the distress termination rules so that (consistent with the change for standard terminations) a contributing sponsor is liable, along with every member of its controlled group, for all unfunded benefit liabilities. In addition, the PPA further restricted the role of the net worth limitation (ERISA section 4062(b)(2)(B) and subsection (a) of section 4068 (29 U.S.C. 1368)).

Upon termination of a single-employer plan under ERISA section 4041(c) or 4042, the above liability now runs solely to the PBGC (ERISA section 4062(b)(1)). Under subsection (c) of ERISA section 4022 (29 U.S.C. 1322), the PBGC is to pay participants and beneficiaries a portion of their outstanding benefit liabilities (*i.e.*, unfunded benefit liabilities that are not guaranteed benefits; see ERISA section 4001(a)(19)) based on the values of its employer liability recoveries. The amounts paid are allocated in accordance with subsection (a) of ERISA section 4044 (29 U.S.C. 1344).

The PPA also enhanced the PBGC's enforcement authority by adding section 4071 (29 U.S.C. 1371) to ERISA. As clarified by OBRA '89, section 4071 authorizes the PBGC to assess a penalty when a person fails to provide any notice or other material information required under subtitle A, B, C, or D of title IV or section 302(f)(4) or 307(e) of Title I (29 U.S.C. 1082(f)(4) or 1085b(e)), or any regulations prescribed thereunder, within the applicable time limit specified therein. (The penalty is payable to the PBGC and may not exceed $1,000 for each day that the failure continues.) section 4071 applies to requirements in provisions of ERISA and PBGC regulations discussed below.

Proposed Rule

On December 14, 1992 (57 FR 59003), the PBGC proposed to amend parts 2606 (Rules for Administrative Review of Agency Decisions), 2612 (Trades or Businesses Under Common Control), 2615 (Certain Reporting and Notification Requirements), 2622 (Employer Liability for Withdrawals from and Terminations of Single-Employer Plans), and 2623 (Benefit Reductions in Terminated Single-Employer Pension Plans and Recoupment of Benefit Overpayments)[2] of the regulations to conform their provisions to current law. The proposed amendments also include minor clarifying and technical changes and modifications in rules of agency procedure or practice.

Although these objectives are limited, their attainment necessitates

[1] SEPPAA substituted "contributing sponsor" and "controlled group" for "employer" terminology in the title IV provisions that delineate termination requirements and liability. These provisions apply whether or not a single-employer plan is maintained by contributing sponsors that are members of more than one controlled group. (Although this distinction still is relevant for certain purposes, the PBGC no longer uses the term "single employer plan" to distinguish single-employer plans that are maintained by one or more trades or businesses under common control from single-employer plans maintained by trades or businesses not under common control.)

[2] The proposed updating of part 2623 terminology also would make a transition sentence in § 2616.4(c) unnecessary.

amendments to a large number of regulatory provisions. Therefore, to assure that, as amended, the regulations reflect current provisions of Title IV and are internally consistent, the PBGC published a notice of proposed rulemaking and specifically invited members of the public to express their views on the adequacy and appropriateness of the proposed amendments (57 FR 59005).

Final Rule

The PBGC received no comments during the comment period. This final rule amends the regulations as proposed, except for corrections and editorial changes.

Part 2606—Rules for Administrative Review of Agency Decisions

For the matters specified in § 2606.1(b), part 2606 of the PBGC's regulations sets forth procedural rules for issuing initial determinations (subpart B) and for administrative review of those determinations (reconsideration or appeal under subpart C or D, respectively). Regulatory changes since the adoption of these procedural rules (formerly part 2613; 44 FR 42181, July 19, 1979) necessitate technical and clarifying changes.

In § 2606.1, the PBGC is amending paragraph (b), which describes the scope of part 2606, as set forth in paragraph (b), to provide for the types of determinations that the agency decided to subject to the initial determination and administrative review procedures in subparts B through D. The PBGC also is removing an unnecessary sentence in paragraph (a) and clarifying paragraph (c) to state that nothing in part 2606 of the regulations limits the PBGC's authority to review a determination to which this part does not apply, either upon request or on its own initiative (*e.g.*, to correct an error), or the procedure utilized in such a review.

The amendments to paragraph (b) include updating the statutory provisions that pertain to various determinations. In paragraphs (b)(1) and (b)(5), the PBGC is deleting the reference to ERISA section 4082(b) (a transitional rule for plans terminating before September 2, 1974) as no longer necessary. In paragraphs (b)(6) and (b)(7), the PBGC is referencing additional ERISA provisions because title IV now addresses guaranteed benefits under multiemployer plans in section 4022A (29 U.S.C. 1322a) and includes the aggregate guaranteed benefit limit in section 4022B (29 U.S.C. 1322b). The PBGC also is amending these paragraphs to reflect the fact that its benefit entitlement decisions (paragraph (b)(6)) now include determinations (as the trustee of terminated plans) that a domestic relations order is or is not a "qualified domestic relations order" (see subsection (d)(3) of ERISA section 206 (29 U.S.C. 1056) and subsection (p) of Code section 414 (26 U.S.C. 414)), and its benefit entitlement and benefit amount decisions (paragraphs (b)(6) and (b)(7)) now include determinations, under ERISA section 4022(c), with respect to outstanding benefit liabilities.

In addition, the PBGC is amending paragraph (b)(3) and paragraphs (b)(9) through (b)(11) to reflect current statutory provisions. Revised paragraph (b)(3) includes the determinations that the PBGC may make in a standard or distress termination proceeding under subsection (b) or (c), respectively, of ERISA section 4041 (see parts 2616 and 2617 of the regulations). All such determinations are subject to reconsideration under subpart C. However, the PBGC has concluded that administrative review, upon contributing sponsor or controlled group member request, of determinations that the distress criteria in section 4041(c)(2)(B) are not met should be by the Executive Director (or his or her designee) rather than by an official of the Insurance Operations Department (the department that issues initial determinations in this area), and it is amending §§ 2606.34 and 2606.36 accordingly.

New paragraph (b)(9) combines previous paragraphs (b)(9) through (b)(11) to avoid unnecessary repetition in describing determinations as to the amount of liability under current law. It includes determinations under ERISA sections 4062(b)(1) and 4064 upon termination of a single-employer plan and under ERISA section 4063 (29 U.S.C. 1363) upon withdrawal of a substantial employer from a single-employer plan under multiple controlled groups. The regulation cites subsection (b)(1) of section 4062 as the provision that now defines the amount of liability to the PBGC upon termination. (Since persons are liable for the total "amount of unfunded benefit liabilities" (as defined in ERISA section 4001(a)(18)), agency determinations of the amount of liability under section 4062(b)(1) do not include net worth decisions (see amendments to part 2622 of the regulations). As indicated above, an aggrieved person still may request that the PBGC review such a decision.)

The amendments to several definitions in § 2606.2 are essentially technical. They reflect changes in the terminology that title IV uses to describe certain "aggrieved persons" (*i.e.*, persons that may be adversely affected by PBGC determinations), including, as a "beneficiary", an alternate payee (within the meaning of ERISA section 206(d)(3)(K)) under a qualified domestic relations order (as required by section 206(d)(3)(J)), a single-employer plan's "contributing sponsor", and members of the same "controlled group" as a contributing sponsor (see §§ 2612.2 and 2617.2). These amendments, and amendments to several other part 2606 provisions, also reflect changes in agency terminology, in particular, the PBGC's use of "department" (rather than "office") to describe its primary organizational units.

Other amendments clarify the intended scope of Part 2606 provisions. Thus, the PBGC is amending § 2606.3 to state that this section applies only to agency assistance in obtaining information (including data) or documents in the possession of a party other than the PBGC. (Access to PBGC records may be requested under the Freedom of Information Act (5 U.S.C. 552) or the Privacy Act (5 U.S.C. 552a) in accordance with part 2603 or 2607, respectively, of the regulations.) Similarly, the PBGC is amending § 2606.22 to reflect the exception in § 2606.23(b): When the PBGC orders that an initial determination is effective on the date of issuance, the determination is to state that there is no obligation to exhaust administrative remedies by seeking PBGC review. (Aggrieved persons still may request that the agency review the determinations in such cases; however, the provisions of subparts C and D do not apply.)

Part 2612—Trades or Businesses Under Common Control

The PBGC promulgated part 2612 of the regulations to implement the title IV requirement that, under regulations consistent and coextensive with regulations prescribed under the Code by the Secretary of the Treasury, employees of trades or businesses (whether or not incorporated) which are under common control be treated as employed by a single employer and all such trades and businesses by treated as a single employer (currently ERISA section 4001(b)(1); previously section 4001(b) and erroneously cited in § 2612.1(a) as section 4001d(b)). After the PBGC adopted part 2612 (41 FR 12302, March 25, 1976, Congress redesignated this requirement and added a requirement that, for single-employer plans, the PBGC's common control determinations for "controlled

group" purposes be made under regulations consistent and coextensive with regulations prescribed under the Code by the Secretary of the Treasury (section 4001(a)(14)).

The PBGC is amending part 2612 to address the range of common control determinations that the agency must make (see revised paragraph (a) of § 2612.1). The amendments conform the regulations to accord with the current statutory provisions, replace the § 2612.2 definition of "trades or businesses (whether or not incorporated) which are under common control" with an expanded § 2612.3, remove unnecessary language from § 2612.1(b), and update, correct, and conform other definitions in § 2612.2.

Part 2615—Certain Reporting and Notification Requirements

The PBGC promulgated part 2615 of the regulations to implement ERISA section 4043 (29 U.S.C. 1343) (formerly part 2617; 45 FR 55636, August 20, 1980; now designated as subpart A of part 2615). Except to the extent that the PBGC exercises its waiver authority, section 4043 requires the reporting of various specified events and any other event that the PBGC determines may be indicative of a need to terminate the plan. Statutory changes since the PBGC's last rulemaking on these requirements (49 FR 22472, May 30, 1984) necessitate technical and clarifying changes. In particular, for consistency with current regulatory requirements and to avoid confusion about the applicability of a number of the reportable event requirements, the PBGC is making changes in terminology. (See, *e.g.*, amendments to § § 2615.3 (b) and (c), 2615.5, and 2615.23(a). In the proposed amendments to § 2615.3(c)(6), the PBGC inadvertently failed to remove ", as applicable" the second time it appears.) In addition, the PBGC is clarifying the purpose of subpart A by noting (in paragraph (a) of § 2615.1) the agency's decision, in a prior rulemaking, to waive section 4043 requirements with respect to multiemployer plans in view of the requirements of the Multiemployer Pension Plan Amendments Act of 1980 (49 FR 22472).

Based on pre-SEPPAA voluntary termination rules, the PBGC (in § 2615.1(b)) limited application of the reportable event requirements to plans "for which a Notice of Intent to Terminate under section 4041 * * * has not been filed with the PBGC." Under current law, however, the PBGC does not receive a notice of intent to terminate in a standard termination, and the notice of intent to terminate in a distress termination contains little of the information previously required. Moreover, under prior law, a plan administrator could file the Notice of Intent to terminate as little as 10 days before the proposed date of plan termination, whereas notices of intent to terminate now must be issued at least 60 days before the proposed termination date specified therein and the PBGC's regulations permit a plan administrator to extend that period (to up to 90 days) in the standard or distress termination notice subsequently filed with the PBGC. (See ERISA section 4041(a)(2)) and §§ 2616.2, 2616.22, 2616.26, 2617.2, 2617.22, and 2617.25.) Also, because section 4041(a)(3) now provides that the PBGC may not proceed with a plan termination that would violate the terms of an existing collective bargaining agreement, the PBGC will suspend a termination proceeding if timely advised that a formal challenge to plan termination has been initiated and, depending upon the final resolution of the challenge, either dismiss the proceeding or, should the plan administrator wish to do so, reactivate it (see §§ 2616.5 and 2617.5.)

In view of these developments, the PBGC is amending paragraph (b) of § 2615.1 to provide that subpart A applies to single-employer plans for which no notice of intent to terminate has been issued or, if such a notice has been issued, until the proposed termination date specified in accordance with regulatory requirements. Also, if a termination proceeding is suspended pursuant to the regulations, subpart A will continue to apply unless and until the PBGC reactivates the proceeding, thereby accounting for the possibility that a significant period of time may pass before resolution of the challenge and a decision as to whether or not the proposed termination will go forward.

The PBGC's amendments to the definitions in § 2615.2 include changes that update statutory references (*e.g.*, the "Code" definition), assure consistency with other regulations (*e.g.*, the "participant", "controlled group", "irrevocable commitment", and "notice of intent to terminate" definitions), and delete unnecessary terms. (Certain of the deleted terms are not used in the regulations, either as now codified (*e.g.*, "Social Security benefits") or as amended (*e.g.*, "single employer plan"); others are unneccessary because the amended regulations adequately address terminology questions elsewhere (*e.g.*, the meaning of "bankruptcy case", in amended §§ 2615.3(c)(5) and 2615.21(a)(1)).)

The PBGCs judgment about whether an event may be indicative of the need to terminate a single-employer plan can differ depending on whether the plan is maintained by multiple "contributing sponsors" that are not members of the same "controlled group". Therefore, certain reportable event requirements distinguish plans which are not "maintained by two or more contributing sponsors that are members of more than one controlled group" from those which are so maintained. (As indicated above, the PBGC previously described the former category as "single employer plans".) The PBGC is retaining this distinction, describing plans in the former category as "maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group", in amended §§ 2615.3(c)(2), 2615.14(b)(2), 2615.21(a), 2615.22(a), and 2615.23(a), as well as in paragraph (c)(2) of § 2615.14, which replaces the definition of "active participant".

The PBGC has decided that the special usage of the term "active participant" should be in § 2615.14, the section that addresses the pertinent reportable event, rather than in § 2615.2. With respect to plans maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group, paragraph (c)(2) of amended § 2615.14 includes the same individuals as those who until now have been described in the (a) portion of the § 2615.2 definition. With respect to plans maintained by two or more contributing sponsors that are members of more than one controlled group, the PBGC has concluded that a special provision no longer is needed because the (b) portion of the § 2615.2 definition covers the same individuals as those who generally are categorized as "active" participants (see § 2610.2, which is referenced in amended § 2615.2).

Other technical changes include updating amendments (*e.g.*, replacement of the statutory citation in § 2615.22(c) and the "Plan Number", PBGC organization, and form references in § § 2615.3(b)(4), 2615.3(e), and 2615.14(b) and 2615.16(b), in that order) and clarifying the date of distribution of an irrevocable commitment (§ 2615.18(d)). (For consistency with other filing requirements, the final uses Code 45000 in the Case Operations and Compliance Department's address.) They also include changes for consistency with the wording and structure of this subpart (*e.g.*, moving the waiver criterion from paragraph (a) to paragraph (b) of § 2615.14).

Part 2622—Employer Liability for Withdrawals from and Terminations of Single-Employer Plans

The PBGC adopted part 2622 of the regulations primarily to prescribe rules for "employer liability" determinations and recovery under ERISA section 4062 and section 4067 (29 U.S.C. 1367) (formerly part 2613; 46 FR 9520, January 28, 1981). Portions of this part also apply to determinations under the special rules of ERISA sections 4063 and 4064 for withdrawal of a "substantial employer" from or termination of a plan (other than a multiemployer plan) under which more than one "employer" made contributions.

Significant changes in part 2622 provisions are necessary to reflect subsequent statutory amendments. In particular, whenever a single-employer plan is terminated, "any person who is, on the termination date, a contributing sponsor * * * or a member of * * * a contributing sponsor's controlled group" is liable to the PBGC for the total amount of unfunded benefit liabilities, together with interest (section 4062 (a) and (b)). Moreover, the collective net worth of these persons is relevant only to whether the entire liability is payable as of the termination date (section 4062 (b)(2)(B)) and to the amount of the lien that ERISA section 4068(a) imposes for nonpayment. Other changes are being made in view of the current timing requirements for distress terminations under ERISA section 4041(c) and new part 2616 of the regulations and to update the terminology used in this part of the regulations.

Revised § 2622.1 summarizes current statutory provisions (paragraph (a)), focusing on liability to the PBGC under ERISA section 4062(b) upon single-employer plan termination and also describing the supplementary rules in ERISA sections 4063 and 4064 upon "substantial employer" withdrawal and termination for plans with two or more contributing sponsors at least two of whom are not under common control. The PBGC uses the term "multiple employer plan" to describe this category of single-employer plans and no longer uses the term "single employer plan" to describe other single-employer plans (see amendments to § 2622.22; see ERISA section 4001(a)(2) and § 2616.2 of the regulations).

The statutory rules on the amount of liability to the PBGC that are reflected in this portion of the rule apply with respect to plans for which voluntary or involuntary termination is initiated after December 17, 1987 (paragraph (b)). (For a termination initiated before that date but on or after January 1, 1986, see the discussion of liability under Title IV as amended by SEPPAA (for unfunded "benefit commitments" in excess of guaranteed benefits) in the PBGC's proposed rule on voluntary terminations (52 FR 33318, 33320, and 33327, September 2, 1987).)

In § 2622.2, the PBGC is adding the term "section 4062(b) liability" to describe the liability to the PBGC now imposed by ERISA section 4062 (see subsections (a) and (b)). The new term "collective net worth of persons subject to liability in connection with a plan termination" and the revised definitions of the terms "net worth" and "net worth record date" reflect the provisions of section 4062(d)(1), as implemented in amended § § 2622.4 and 2622.5. Other amendments to § 2622.2 add terms now used in subtitle D of title IV and/or part 2616 (*e.g.*, "proposed termination date"), delete terms that are not needed in this part of the regulations (*e.g.*, "employer" and "Title IV"), and make minor technical and editorial changes (*e.g.*, to the definition of "Act").

Revised § 2622.3 states, in paragraphs (a) and (b), respectively, the statutory rules on the amount of section 4062(b) liability and the payment of that liability, including the PBGC's authority to make alternative arrangements for the satisfaction of liability (see ERISA sections 4062(b)(3) and 4067). Since net worth does not affect the amount of liability, the revised section does not address net worth notification or determinations. (Similarly, the PBGC is deleting the last sentence of § 2622.6(c).)

The exception in paragraph (b) reflects the limitation on the general rule that section 4062(b) liability is due and payable as of the termination date: under section 4062(b)(2)(B), payment of so much of the liability as exceeds 30 percent of the collective net worth of all persons described in section 4062(a) is to be made under commercially reasonable terms prescribed by the PBGC. The statutory rules for such cases are set forth in paragraph (c) of § 2622.8.

The statutory definition of "collective net worth of persons subject to liability in connection with a plan termination" (section 4062(d)(1)) incorporates pre-SEPPAA rules, including the requirement that net worth determinations be computed without regard to any liability under section 4062 (subsection (d)(1)(C)). These statutory rules now are applied to each "person" that is subject to such liability. The PBGC is amending §§ 2622.4 through 2622.6 accordingly. (See also amendments to §§ 2622.7 through 2622.9, which include changes for consistency with other statutory phrasing as well.)

The collective net worth of such persons is the sum of the individual net worths of those with individual net worths that are greater than zero (subsection (d)(1)(A)). Revised paragraph (a) of § 2622.4 provides that the PBGC will determine individual net worths and collective net worth when liable persons notify the agency and submit net worth information (as it has until now). (See § 2622.6(c) regarding incomplete submissions.)

The statutory definition now also provides for the timing of net worth determinations (subsection (d)(1)(C)). Because the net worth record date requirements of § 2622.5 are consistent with the statutory rule that "determinations * * * be made as of a day chosen by the [PBGC] (during the 120-day period ending with the termination date)," the PBGC is making only technical and editorial amendments to this section.

The PBGC is expanding § 2622.6 to include in paragraph (a) net worth notification requirements (until now addressed in § 2622.3(b)), and it is moving the net worth information specifications (subparagraphs (1) through (7)) from paragraph (a) to paragraph (b) and making several editorial changes. The notification and information submission requirements apply to any contributing sponsor or member of the contributing sponsor's controlled group that believes section 4062(b) liability exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination (*i.e.*, that the liability under section 4062(b) is subject to the exception to the general rule on payment) (paragraph (a)(1)). However, if a contributing sponsor or member of the contributing sponsor's controlled group complies, the PBGC will consider these requirements to be satisfied by all members of that controlled group, while reserving the authority to require any person subject to liability to submit information (paragraphs (a)(2) and (a)(3)).

As discussed above, the statutory requirements for voluntary termination of an insufficient plan, as now implemented in part 2616, are significantly different from those that applied when the PBGC promulgated this part of the regulations. A plan can terminate under ERISA section 4041(c) only if financial hardship is demonstrated and other requirements are met. Among other things, the notice of intent to terminate that is filed with the PBGC (PBGC Form 600) must identify the distress criterion that each

contributing sponsor and member of a contributing sponsor's controlled group expects to meet and must provide documentation regarding any relevant liquidation or reorganization proceedings; and the distress termination notice (PBGC Form 601), which is due by the 120th day after the proposed termination date (see § 2616.24(a)), must include the information required to prove each such person satisfies one of the distress criteria. Thus, substantial analysis of the financial condition of liable persons should have occurred by the time notices of intent to terminate are issued, either in planning for distress termination or as part of another proceeding, and further financial and other business information must be compiled within the next few months.

In view of the above, the PBGC has concluded that the time limits established in 1981 should be amended to reflect subsequent changes in the regulatory scheme and coordinate part 2622 with the requirements in part 2616 in future distress terminations. Amended § 2622.6(a)(1) requires contributing sponsors and controlled group members that believe section 4062(b) liability exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination to so notify the agency by the 90th day after filing of the notice of intent to terminate with the PBGC and to submit net worth information by the 120th day after the proposed termination date (*i.e.*, by the deadline for filing the distress termination notice) (subparagraphs (1)(i) and (1)(ii)(A)). (As explained in the proposed rule (57 FR 59008), these periods will provide comparable time with respect to plans being terminated in distress terminations, and they are consistent with the agency's 1981 rationale for this part of the regulations.

The time limits established in 1981 continue to apply with respect to plans for which termination is initiated by the PBGC instituting proceedings under ERISA section 4042 (subparagraphs (1)(i) and (1)(ii)(B)). (Because, in the PBGC's judgment, the regulations no longer need to emphasize when a plan's termination date is established, amended § 2622.6(a)(1) does not include the last sentence of current § 2622.3(b).)

Amended paragraph (a)(3) of § 2622.6 addresses when the net worth information specified in this section must be submitted within a shorter period and when additional information must be submitted. It consolidates and streamlines existing regulatory provisions. (For example, the agency has concluded that the regulations need no longer state that one situation in which it may need additional information is when the PBGC establishes an earlier net worth record date after submission of the information specified in this section.) In addition, amended § 2622.6(a)(3) provides that the PBGC will specify the time within which a person subject to liability is required to submit information.

The distress termination requirements also increase the possibility that information required to be submitted pursuant to § 2622.6 already has been submitted to the PBGC. Therefore, to avoid duplicative efforts, paragraph (a)(4) provides that a person may respond to such a requirement by identifying a previous submission.

ERISA section 4062(b) now provides that liability to the PBGC includes "interest (at a reasonable rate) calculated from the termination date in accordance with regulations prescribed by the [PBGC]." Because paragraphs (a) and (c) of § 2622.7 currently impose interest on the unpaid portion of the liability (if any) at the rate prescribed in Code section 6601(a), the PBGC is making only technical and editorial changes in these paragraphs. Other amendments update § 2622.7 by modifying the terminology and deleting provision for the calculation of pre-1983 interest (see also amended § 2622.8(d)).

As noted above, the PBGC is expanding § 2622.8 to address payment, under commercially reasonable terms, of the portion of section 4062(b) liability that exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination (see section 4062(b)(2)(B)), as well as the exercise of its discretion to defer payment of liability upon request. Revised paragraph (c) sets forth the rules for cases in which the PBGC determines that section 4062(b) liability exceeds 30 percent of the collective net worth of all liable persons. The PBGC's standards and factors for determining what, if any, deferred payment or other terms for the satisfaction of liability to grant and the procedure for requesting such action are included in revised paragraph (b). The amended rules apply to persons that are or may become liable under ERISA section 4062, 4063, or 4064 and provide for updating information when a request is made one year or more after the net worth record date.

The PBGC also is amending paragraphs (a) and (b) of § 2622.9 to provide that its requests and demands for liability indicate that the agency will prescribe commercially reasonable terms for payment of so much of the liability that exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination. The amendments to this section and § 2622.10 include other updating and editorial changes. In particular, amended § 2622.10(b) requires that liability payments be sent to the address specified in the notification or demand for liability issued under § 2622.9 or, if not specified therein, to the address provided (upon request) by the PBGC's Investment Management Division.

Part 2623—Benefit Reductions in Terminated Single-Employer Pension Plans and Recoupment of Benefit Overpayments

The PBGC promulgated part 2623 of the regulations to minimize benefit overpayments by the administrators of plans that ultimately will be trusteed by the PBGC under ERISA section 4042 because they are insufficient for guaranteed benefits (subpart B) and to provide rules for the recoupment of benefit overpayments and reimbursement of benefit underpayments when the PBGC is appointed trustee (subpart C). As discussed above, when the agency adopted these regulations (50 FR 3892, January 29, 1985), the statutory requirements for voluntary termination were significantly different than they are today. Among other things, ERISA section 4041 did not address the payment of plan benefits after termination is initiated, and the proposed date of termination specified by a plan administrator might be only 10 days after the filing of a Notice of Intent to Terminate.

Section 4041(c)(3)(D) now includes specific requirements for plan administration during the pendency of a distress termination under ERISA section 4041(c), and the PBGC has implemented these requirements, as well as notice and information requirements, in part 2616 of the regulations. Therefore, this rule limits the functions of subpart B of part 2623 and coordinates its provisions with the requirements of section 4041(c) and part 2616. Among the amendments are changes to reflect current timing requirements and to update the terminology used in both subparts B and C.

In addition, as indicated in its Agenda of Regulations Under Development, the PBGC plans to propose a new part of the regulations on the payment of benefits in PBGC-trusteed plans (57 FR 52240). Because the PBGC believes that benefit payment regulations should address recoupment and reimbursement, it plans to transfer subpart C of part 2623

to that part of the regulations, and it expects to consider further amendments to subpart C provisions during the development of benefit payment regulations.

The PBGC is amending the title of part 2623 and § 2623.1 to reflect, in current terminology (see amendments to § 2623.2), the subjects addressed by this part of the regulations and to eliminate unnecessary language. As indicated by revised paragraph (a) of § 2623.1, the procedures in subpart B apply to plans that are terminating in a "distress termination" and, hence, generally are not expected to be "sufficient for guaranteed benefits"; those in subpart C apply to recoupment and reimbursement of benefit payments under any "PBGC-trusteed plan".

The amendments to § 2623.2 add several terms (*e.g.*, "guaranteed benefit") and replace terms no longer used. The PBGC is substituting "proposed termination date" for "section 4041(a) date of termination" and "termination date" for "section 4048 date of termination" (see amendments to §§ 2623.5, 2623.6, 2623.7, 2623.11, and 2623.12). (Since substituting "proposed termination date" for "section 4041(a) date of termination" makes the last sentence of § 2616.4(c) unnecessary, the PBGC is deleting it.)

Because paragraphs (b), (c), and (e) of § 2616.4 include the actions prohibited during distress termination proceedings and the rules for when "benefit payments" must be reduced, the PBGC is amending § 2623.5 by deleting paragraphs (e) and (f)(1) (and redesignating the remainder of paragraph (f) as paragraph (e)) and the timing and applicability conditions in paragraph (a). Revised § 2623.5(a) describes the restricted role that this subpart now plays: providing the methodology for determining benefits that plan administrators may not pay (§ 2623.5 (b) and (c) and must pay (§§ 2623.5(d), 2623.6, and 2623.7) when § 2616.4 requires that benefit payments be limited.

The PBGC is deleting references to when benefit payment limitations apply from paragraphs (b) through (d) of § 2623.5 as well. In addition, the rule includes updated examples in paragraph (g) (redesignated as paragraph (f)) of § 2623.5 and §§ 2623.6(e) and 2623.7(e).

Amended § 2623.5(d) continues to require that plan administrators "pay the monthly benefit * * * determined under § 2623.6 or § 2623.7, whichever produces the higher benefit." Therefore, the PBGC is removing the last sentence of paragraph (a) of § 2623.6 (the procedures for computing estimated guaranteed benefits) and the last sentence of paragraph (a) of § 2623.7 (the procedures for computing estimated title IV benefits) as redundant. Also, the PBGC is removing § 2623.8 because, in implementing the requirements of ERISA section 4041(a)(2) and (c) (1) and (2), the agency has addressed the information needs of both participants and the agency elsewhere (see part 2616).

Finally, the amendments to subpart C include, in addition to conforming terminology and timing changes, the substitution of "PBGC-trusteed plan" for "terminated insufficient plan" in § 2623.11 (a) and (b). The PBGC generally is appointed trustee when a plan is not sufficient for guaranteed benefits. However, the PBGC may be appointed trustee of a plan that is sufficient for guaranteed benefits, and the subpart C procedures are intended to apply in such situations.

E.O. 12291

The PBGC has determined that this final rule is not a "major rule" for the purposes of Executive Order 12291 because it will not have an annual effect on the economy of $100 million or more; create a major increase in costs or prices for consumers, individual industries, or geographic regions; or have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets. The primary purpose of these amendments is to conform the regulations to existing statutory requirements. The rule also includes other, minor modifications of existing regulations.

List of Subjects

29 CFR Part 2606

Administrative practice and procedures, Organization and functions (Government agencies), Pension insurance, Pensions.

29 CFR Part 2612

Business and industry, Pension insurance, Pensions, Small businesses.

29 CFR Part 2615

Employee benefit plans, Pension insurance, Pensions, Reporting requirements.

29 CFR Part 2616

Employee benefit plans, Pension insurance, Pensions, Reporting requirements.

29 CFR Part 2622

Business and industry, Employee benefit plans, Pension insurance, Pensions, Reporting requirements, Small businesses.

29 CFR Part 2623

Employee benefit plans, Pension insurance, Pensions, Reporting and recordkeeping requirements.

For the reasons set forth above, the PBGC is amending 29 CFR Parts, 2606, 2612, 2615, 2616, 2622, and 2623 as follows:

PART 2606—RULES FOR ADMINISTRATIVE REVIEW OF AGENCY DECISIONS

1. The authority citation for part 2606 is revised to read as follows:

Authority: 29 U.S.C. 1302(b)(3).

2. Paragraph (a) of § 2606.1 is amended by removing the last sentence.

3. Paragraphs (b) and (c) of § 2606.1 are amended by removing "or section 4062(b)" in paragraph (b)(1) and paragraph (b)(5); by adding "or (c) or section 4022A(a)" after "section 4022(a)" and by adding "and determinations that a domestic relations order is or is not a qualified domestic relations order under section 206(d)(3) of the Act and section 414(p) of the Code" after "covered plans" and before the semicolon in paragraph (b)(6); by adding "or (c), section 4022A (b) through (e), or section 4022B" after "section 4022(b)" and by removing "guaranteed benefits of" and adding, in its place, "benefits payable to" in paragraph (b)(7); by adding "and" at the end in paragraph (b)(8); by removing paragraph (b)(10) and paragraph (b)(11); and by revising paragraph (b)(3), (b)(9), and (c) to read as follows:

§ 2606.1 Purpose and scope.

* * * * *

(b) Scope. * * *

(3) Determinations with respect to voluntary terminations under subsection (b) (standard terminations) or subsection (c) (distress terminations) of section 4041 of the Act, including—

(i) A determination that a notice requirement under section 4041(b)(1) (A) and (B) or section 4041(c)(1) (A) or (B) or a certification requirement under section 4041(b)(3)(B) or section 4041(c)(3)(B) of the Act has not been met,

(ii) A determination that a contributing sponsor or a member of a contributing sponsor's controlled group does not meet the requirements for demonstrating distress under section 4041(c)(2)(B) of the Act, and

(iii) A determination under section 4041(b)(2) or section 4041(c)(3) of the Act with respect to the sufficiency of plan assets for benefit liabilities or for guaranteed benefits;

* * * * *

(9) Determinations of the amount of liability under section 4062(b)(1), section 4063, or section section 4064 of the Act.

(c) Matters not covered by this part. Nothing in this part limits—

(1) The authority of the PBGC to review, either upon request or on its own initiative, a determination to which this part does not apply when, in its discretion, the PBGC determines that it would be appropriate to do so, or

(2) The procedure that the PBGC may utilize in reviewing any determination to which this part does not apply.

4. In § 2606.2, the definition of Act is amended by adding ", as amended" at the end before the period; the definition of Director or Office Director is amended by removing "Office" and adding, in its place, "Department" and by removing "office" and adding, in its place "department"; and the definition of aggrieved person is revised and a definition of Code is added to read as follows:

§ 2606.2 Definitions.

* * * * *

Aggrieved person means any participant, beneficiary, plan administrator, contributing sponsor of a single-employer plan or member of such a contributing sponsor's controlled group, plan sponsor of a multiemployer plan, or employer that is adversely affected by an initial determination of the PBGC with respect to a pension plan in which such participant, beneficiary, plan administrator, contributing sponsor, controlled group member, plan sponsor, or employer has an interest. The term "beneficiary" includes an alternate payee (within the meaning of section 206(d)(3)(K) of the Act) under a qualified domestic relations order (within the meaning of section 206(d)(3)(B) of the Act). The term "contributing sponsor" includes only a person entitled to receive a deduction under section 404(a) of the Code (or that would be entitled to receive a deduction except for the limitations in section 404(a)) for contributions required to be made to a single-employer plan under section 302 of the Act and section 412 of the Code. The term "controlled group" includes all persons under common control with a contributing sponsor and the term "employer" includes all trades or businesses under common control, as provided in subsections (a)(14) and (b)(1) of section 4001 of the Act and part 2612 of this chapter.

* * * * *

Code means the Internal Revenue Code of 1986, as amended.

* * * * *

§ 2603.3 [Amended]

5. Section 2606.3 is amended by removing "data" each time it appears and adding, in its place, "documents"; by removing "the information" at the end of the first sentence before the period and adding, in its place, "information or documents in the possession of a party other than the PBGC"; and by adding "or documents" at the end of the second sentence before the period.

§ 2606.7 [Amended]

6. Section 2606.7 is amended by removing "an Office" and adding, in its place, "a Department" and by removing "by the PBGC" at the end before the period.

§ 2606.9 [Amended]

7. Section 2606.9(b) is amended by removing "Office" and adding, in its place, "department".

§ 2606.22 [Amended]

8. Section 2606.22 is amended by adding ", except when effective on the date of issuance as provided in § 2606.23(b)," before "shall contain".

§ 2606.34 [Amended]

9. Section 2606.34 is amended by removing "office" and adding, in its place, "department" and by adding, at the end before the period, ", except that a request for reconsideration of a determination described in § 2606.1(b)(3)(ii) shall be submitted to the Executive Director".

§ 2606.36 [Amended]

10. Paragraph (a) of § 2606.36 is amended by removing "office" both times it appears and adding, in its place, "department"; by removing "an Office" and adding, in its place, "a Department"; by removing "the Office" both times it appears and adding, in its place, "the Department"; and by adding, at the end of the second sentence before the period, "of a determination other than one described in § 2606.1(b)(3)(ii), and the Executive Director (or an official designated by the Executive Director) will issue the final decision on a request for reconsideration of a determination described in § 2606.1(b)(3)(ii)".

§ 2606.51 [Amended]

11. Section 2606.51 is amended by removing "(11)" and adding, in its place, "(9)".

PART 2612—TRADES OR BUSINESSES UNDER COMMON CONTROL; CONTROLLED GROUPS

12. The authority citation for part 2612 is revised to read as follows:

Authority: 29 U.S.C. 1301(a)(14), 1301(b)(1), and 1302(b)(3).

13. The title of part 2612 is revised as set forth above.

14. Paragraph (a) of § 2612.1 is revised to read as follows:

§ 2612.1 Purpose and scope.

(a) Purpose. This part includes the regulations under which, for purposes of title IV of the Act, the PBGC determines the trades or businesses (whether or not incorporated) that are under common control and, hence, treated as a single employer and whether, in the case of a single-employer plan, two or more persons are under common control and, hence, members of the same controlled group. Section 4001 of the Act requires, in subsections (b)(1) and (a)(14), respectively, that the former and the latter determinations be made under PBGC regulations which are consistent and coextensive with regulations prescribed by the Secretary of the Treasury under section 414(c) and section 414 (b) and (c), respectively, of the Code.

* * * * *

§ 2612.1 [Amended]

15. Paragraph (b) of § 2612.1 is amended by adding "Scope." at the beginning after the paragraph (b) designation; by removing "(88 Stat. 1014)"; and by removing everything after "applies" and before the period.

16. In § 2612.2, the definition of Act is amended by removing "Means" and adding, in its place, "means" and by removing "(88 Stat. 829 *et seq.*)" and adding, in its place, ", as amended"; the definition of trades or businesses (whether or not incorporated) which are under common control is removed; and definitions of Code and single-employer plan are added, in alphabetical order, to read as follows:

§ 2612.2 Definitions.

* * * * *

Code means the Internal Revenue Code of 1986, as amended.

Single-employer plan means any defined benefit plan (as defined in section 3(35) of the Act) that is not a multiemployer plan (as defined in section 4001(a)(3) of the Act).

17. Section 2612.3 is amended by adding "; controlled groups" after "control" in the title; by removing the comma after "Act", adding a colon in its

place, and designating the remainder of the current text as paragraph (a)(2); and by adding new paragraphs (a)(1), (a)(3), and (b). As so revised, § 2612.3 reads as follows:

§ 2612.3 Trades or businesses under common control; controlled groups.

For purposes of title IV of the Act:

(a)(1) The PBGC will determine that trades and businesses (whether or not incorporated) are under common control if they are "two or more trades or businesses under common control", as defined in regulations prescribed under section 414(c) of the Code.

(2) All employees of trades or businesses (whether or not incorporated) which are under common control shall be treated as employed by a single employer, and all such trades and businesses shall be treated as a single employer.

(3) An individual who owns the entire interest in an unincorporated trade or business is treated as his own employer, and a partnership is treated as the employer of each partner who is an employee within the meaning of section 401(c)(1) of the Code.

(b) In the case of a single-employer plan:

(1) In connection with any person, a controlled group consists of that person and all other persons under common control with that person.

(2) The PBGC will determine that persons are under common control if they are members of a "controlled group of corporations", as defined in regulations prescribed under section 414(b) of the Code, or if they are "two or more trades or businesses under common control", as defined in regulations prescribed under section 414(c) of the Code.

PART 2615—CERTAIN REPORTING AND NOTIFICATION REQUIREMENTS

18. The authority citation for part 2615 continues to read as follows:

Authority: 29 U.S.C. 1082(f), 1302(b)(3), 1343, and 1365.

19. In § 2615.1, paragraph (a) and the first sentence of paragraph (b) are revised to read as follows:

§ 2615.1 Purpose and scope.

(a) Purpose. This subpart prescribes specific requirements for notification of the reportable events in section 4043 of the Act, including the reportable events specified in section 4043(b)(1) through (b)(8) and other events that the PBGC has determined, under section 4043(b)(9), may be indicative of a need to terminate the plan. It also implements the PBGC's authority to waive the requirement that plan administrators notify the PBGC with respect to certain reportable events and with respect to certain plans. (The PBGC has waived the requirements of section 4043 with respect to multiemployer plans.)

(b) Scope. This subpart applies with respect to any single-employer plan (within the meaning of section 4001(a)(15) of the Act) which is covered by section 4021 of the Act and for which either no notice of intent to terminate has been issued or, if such a notice has been issued, until the proposed termination date specified under section 4041 (b) or (c) of the Act and part 2616 or 2617 of this subchapter; *provided, that,* if a termination proceeding is suspended pursuant to § 2616.5 or § 2617.5 of this subchapter, this subpart continues to apply unless and until the PBGC reactivates the termination proceeding. * * *

§ 2615.2 [Amended]

20. In § 2615.2, the definition of Act is amended by removing "(29 U.S.C. 1001 *et seq.* (1976))" and adding, in its place, ", as amended"; the definition of *active participant* is redesignated as paragraph (c)(2) of § 2615.14(c); the definition of *Code* is amended by removing "1954" and adding, in its place, "1986"; the definition of *irrevocable commitment* is amended by removing "which" the first time it appears and adding, in its place, "if the obligation", by removing "which" the second time it appears, and by removing "against the insurer"; the definition of *nonforfeitable benefits which are not funded* is amended by adding "section 4001(a)(8) of the Act and as provided in" after "as defined in"; the definition of *plan* is amended by removing "be a single employer, multiemployer, or multiple employer plan" and adding, in its place, "is maintained by one or more contributing sponsors"; the definition of *plan year* is amended by removing ", policy"; the definitions of *substantial owner* is amended by removing "4022(b)(6)(A)" and adding, in its place, "4022(b)(5)(A)"; the definitions of *bankruptcy case, break in service, employer, money purchase plan, normal retirement benefit, plan sponsor, Railroad Retirement benefits, single employer plan, Social Security benefits,* and *Title IV* are removed; and the definitions of *contributing sponsor, controlled group,* and *participant* are revised and definitions of *notice of intent to terminate* and *proposed termination date* are added, in alphabetical order, to read as follows:

§ 2615.2 Definitions.

* * * * *

Contributing sponsor means the person entitled to receive a deduction under section 404(a) of the Code (or that would be entitled to receive a deduction except for the limitations in section 404(a)) for contributions required to be made to the plan under section 302 of the Act and section 412 of the Code.

Controlled group means, in connection with any person, a group consisting of such person and all other persons under common control with such person, determined under part 2612 of this chapter.

* * * * *

Notice of intent to terminate means the notice to affected parties advising each of a proposed plan termination, as required by section 4041(a)(2) of the Act and § 2616.22 or § 2617.22 of this subchapter.

* * * * *

Participant has the same meaning as in § 2610.2 of this chapter.

* * * * *

Proposed termination date means the date specified as such by the plan administrator in a notice of intent to terminate or, if later, in the distress termination notice or the standard termination notice, in accordance with section 4041 of the Act and part 2616 or part 2617 of this subchapter.

* * * * *

§ 2615.3 [Amended]

21. Paragraph (b)(2) of § 2615.3 is amended by removing the word "plan" and adding, in its place, "contributing".

22. Paragraph (b)(4) of § 2615.3 is amended by removing "plan sponsor" both times it appears and adding, in its place, "contributing sponsor"; by removing "Plan Identification Number (PIN)" and adding, in its place, "Plan Number (PN)"; and by removing "EIN–PIN" both times it appears and adding, in its place, "EIN–PN".

23. Paragraph (c)(2) of § 2615.3 is amended by removing "single employer plan," and adding, in its place, "plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group,".

24. Paragraph (c)(5) of § 2615.3 is amended by removing "bankruptcy or liquidation" and adding, in its place, "bankruptcy, insolvency, or similar settlement".

25. Paragraph (c)(6) of § 2615.3 is amended by removing "of employer" and adding, in its place, "in the same controlled group as a contributing sponsor"; by removing ", or of the trade or business no longer controlled by the contributing sponsor, or of the new trade or business controlling" and

adding, in its place, "or of the person no longer under common control with"; and by removing ", and of the trade or business no longer controlled by the contributing sponsor, or the new trade or business controlling the contributing sponsor, as applicable" and adding, in its place, "and of the person no longer under common control with the contributing sponsor". As so revised, paragraph (c)(6) reads as follows:

§ 2615.3 Requirement of notice.

* * * * *

(c) Additional information. * * *

(6) For an event described in § 2615.23(a) (relating to a transaction involving a change in the same controlled group as a contributing sponsor):

The name, address, and telephone number of the new contributing sponsor or of the person no longer under common control with the contributing sponsor, as applicable; a copy of the most recent audited (or if not available, unaudited) financial statements, and the most recent interim financial statements, of the contributing sponsor before and after the transaction and of the person no longer under common control with the contributing sponsor (individually or where financial statements are only available on a consolidated basis with other members of the same controlled group, on a consolidated basis), including balance sheets, income statements, statements of changes in financial position and annual reports.

* * * * *

§ 2615.3 [Amended]

26. Paragraph (e) of § 2615.3 is amended by removing "Office of Program Operations" and adding, in its place, "Case Operations and Compliance Department" and by removing "Room 5300A" and adding, in its place, "room 5500 (Code 45000)".

§ 2615.5 [Amended]

27. Section 2615.5 is amended by removing "employer" and adding, in its place, "contributing sponsor" in the title and by removing "an employer making contributions" and adding, in its place, "a contributing sponsor" in the text.

§§ 2615.12, 2615.15 and 2615.16 [Amended]

28. Sections 2615.12(a), 2615.15(a), and 2615.16(a) are amended by removing "the plan" and adding, in its place, "a plan".

§ 2615.14 [Amended]

29. Paragraph (a) of § 2615.14 is amended by removing everything after "previous plan year" and before the period.

30. Paragraph (b) of § 2615.14 is amended by removing in the introductory text "either paragraph (b)(1) or (b)(2)" and adding, in its place, "paragraph (b)(1), (b)(2), or (b)(3)" and by adding a new paragraph (b)(3) to read as follows:

§ 2615.14 Active participant reduction.

* * * * *

(b) * * *

(3) The present value of unfunded vested benefits under the plan (as reported on the most recently filed IRS/DOL/PBGC Form 5500 or Form 5500–C/R) is less than $250,000.

* * * * *

31. Paragraph (b)(2) of § 2615.14 is amended by removing "single employer plan, as" and adding, in its place, "plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group, as" and by removing "the single employer plans covered by section 4021 that are maintained by the employer" and adding, in its place, "the plans covered by this part that are maintained by a contributing sponsor and all members of the same controlled group, if any, either"; and by removing "or not" and adding, in its place "or is not". As so revised, paragraph (b)(2) reads as follows:

* * * * *

(b) * * *

(2) With respect to a plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group, as of the date of the event, the total number of active participants covered by all the plans covered by this part that are maintained by a contributing sponsor and all members of the same controlled group, if any, either is not less than 80 percent of the total number of active participants in all such plans determined as of the beginning of each such plan's current plan year, or is not less than 75 percent of the total number of active participants in all such plans determined as of the beginning of each such plan's previous plan year.

* * * * *

32. Paragraph (c) of § 2615.14 is amended by designating the sentence after the heading as paragraph (1) and by revising the definition of active participant, redesignated as paragraph (2), to read as follows:

* * * * *

(c) Determination of the number of active participants.

* * * * *

(2) For purposes of this section and information submitted pursuant to § 2615.3(c)(1), with respect to a plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group, include as "active" only a participant who—

(i) Is receiving compensation for work performed;

(ii) Is on paid or unpaid leave granted for a reason other than a layoff;

(iii) Is laid off from work for a period of time that has lasted less than 30 days; or

(iv) Is absent from work due to a recurring reduction in employment that occurs at least annually.

33. The first sentence of paragraph (b) of § 2615.16 is amended by removing "Forms 5500, 5500–C, 5500–K or 5500–R" and adding, in its place, "Form 5500 or Form 5500–C/R".

§ 2615.18 [Amended]

34. Paragraph (d) of § 2615.18 is amended by removing "effective date of the irrevocable commitment" in the first sentence and adding, in its place, "date on which the obligation to provide benefits passes from the plan to the insurer".

35. In paragraph (f) of § 2615.18, the heading is revised to read "Valuation of assets and benefits".

§ 2615.21 [Amended]

36. Paragraph (a) of § 2615.21 is amended by removing in the introductory text "single employer plan," and adding, in its place, "plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group" and by adding "(under Title 11, U.S.C.)" before ", or" in paragraph (a)(1).

§ 2615.22 [Amended]

37. In paragraph (a) of § 2615.22, the introductory text is amended by removing "single employer plan," and adding, in its place, "plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group,".

38. Paragraph (c) of § 2615.22 is amended by removing "section 4062(d)" in the heading and adding, in its place, "section 4069(b)" and by removing "section 4062(d)" in the text and adding, in its place, "section 4069(b)".

§ 2615.23 [Amended]

39. The title of § 2615.23 is amended by removing "of employer" and adding, in its place, "in contributing sponsor or controlled group".

40. Paragraph (a) of § 2615.23 is amended by removing "a single

employer plan of a contributing sponsor" and adding, in its place, "a plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group"; by removing "trade or business" each time it appears in paragraph (a)(1)(iii) and paragraph (a)(2) and adding, in its place, "person"; and by removing "the sponsor" in paragraph (a)(2) and adding, in its place, "the contributing sponsor". As so revised, paragraph (a) reads as follows:

§ 2615.23 Transaction involving a change in contributing sponsor or controlled group.

(a) Reportable event. Except as provided in paragraph (c) of this section, a reportable event with respect to a plan maintained by one contributing sponsor or by two or more contributing sponsors that are members of the same controlled group with nonforfeitable benefits which are not funded of $1 million or more when—

(1) As a result of a transaction involving a transfer of assets of or an ownership interest in a contributing sponsor—

(i) There is or will be a new contributing sponsor that is not a member of the controlled group of the previous contributing sponsor;

(ii) The contributing sponsor leaves or will leave the controlled group; or

(iii) The contributing sponsor becomes or will become a member of a different controlled group, except where the new controlled group is or will be the same, but for the addition of another person, as the contributing sponsor's controlled group before the transaction; or

(2) As a result of a transaction involving a transfer by a contributing sponsor of assets of or an ownership interest in another person, the contributing sponsor and that person are or will be no longer part of the same controlled group.

* * * * *

41. In paragraph (e) of § 2615.23, the heading is revised to read "Valuation of assets and benefits".

PART 2616—DISTRESS TERMINATIONS OF SINGLE-EMPLOYER PLANS

42. The authority citation for part 2616 continues to read as follows:

Authority: 29 U.S.C. 1302(b)(3), 1341, and 1344.

43. Paragraph (c) of § 2616.4 is amended by removing the last sentence.

PART 2622—LIABILITY ON TERMINATION OF OR WITHDRAWAL FROM A SINGLE-EMPLOYER PLAN

44. The authority citation for part 2622 is revised to read as follows:

Authority: 29 U.S.C. 1302(b)(3), 1362–1364, and 1367–1368.

45. The title of part 2622 is revised as set forth above.

46. Section 2622.1 is revised to read as follows:

§ 2622.1 Purpose and scope.

(a) Purpose. The purpose of this part is to set forth rules for determination and payment of the liability incurred, under section 4062(b) of the Act, upon termination of any single-employer plan and, to the extent appropriate, determination of the liability incurred with respect to multiple employer plans under sections 4063 and 4064 of the Act. This part also includes related rules regarding payment arrangements under section 4067 of the Act and the PBGC's lien under section 4068 of the Act with respect to liability arising under section 4062, 4063, or 4064.

When a single-employer plan is terminated under section 4041(c) or 4042 of the Act, section 4062 imposes joint and several liability, to the PBGC and the trustee appointed under section 4042 (b) or (c), on any person that, on the termination date, is a contributing sponsor or a member of a contributing sponsor's controlled group. Sections 4063 and 4064, in conjunction with section 4062, apply to liability determinations with respect to multiple employer plans. Under section 4063, the PBGC determines the conditional liability for withdrawal of a substantial employer; under section 4064, the PBGC determines the liability upon termination of persons that, within the 5 preceding plan years, contributed to the plan. Both sections provide for prorating or allocating liability among controlled groups after calculating the amount for the entire plan under section 4062(b), and section 4062(e) makes sections 4063 and 4064 applicable when there are certain cessations of operations at a facility. (See section 4069 of the Act regarding transactions to evade liability and certain corporate reorganizations.)

(b) Scope. The provisions of this part regarding the amount of liability to the PBGC that is incurred upon termination of a single-employer plan apply with respect to a plan for which a notice of intent to terminate under section 4041(c) of the Act is issued or proceedings to terminate under section 4042 of the Act are instituted after December 17, 1987. Those provisions also apply, to the extent described in paragraph (a) of this section, to the amount of liability for withdrawal from a multiple employer plan after that date.

§ 2622.2 [Amended]

47. In § 2622.2, the definition of Act is amended by removing "is" and adding, in its place, "means" and by removing everything after "1974," and before the period and adding, in its place, "as amended"; the definition of *PBGC* is amended by removing "is" and adding, in its place, "means"; the definitions of *date of plan termination*, employer, plan asset insufficiency, *single employer plan*, and *Title IV* are removed; and the definitions of net worth and net worth record date are revised and definitions of *Code*, *collective net worth of persons subject to liability in connection with a plan termination*, *contributing sponsor*, *controlled group*, *multiple employer plan*, *notice of intent to terminate*, *proposed termination date*, *section 4062(b) liability*, *single-employer plan*, *and termination date* are added, in alphabetical order, to read as follows:

§ 2622.2 Definitions.

* * * * *

Code means the Internal Revenue Code of 1986, as amended.

Collective net worth of persons subject to liability in connection with a plan termination means the sum of the individual net worths of all persons that have individual net worths which are greater than zero and that (as of the termination date) are contributing sponsors of the terminated plan or members of their collection groups, as determined in accordance with section 4062(d)(1) of the Act and § 2622.4 of this part.

Contributing sponsor means the person entitled to receive a deduction under section 404(a) of the Code (or that would be entitled to receive a deduction except for the limitations in section 404(a)) for contributions required to be made to the plan under section 302 of the Act and section 412 of the Code.

Controlled group means, in connection with any person, a group consisting of such person and all other persons under common control with such person, determined under part 2612 of this subchapter.

Multiple employer plan means a single-employer plan maintained by two or more contributing sponsors that are not members of the same controlled group, under which all plan assets are available to pay benefits to all plan participants and beneficiaries.

Net worth means the fair market value of a person liable under section 4062 of

the Act, as determined in accordance with section 4062(d)(1) of the Act and § 2622.4 of this part.

Net worth record date means the day, chosen by the PBGC in accordance with section 4062(d)(1) of the Act and § 2622.5 of this part, as of which the PBGC makes net worth determinations.

Notice of intent to terminate means the notice to affected parties advising each of a proposed plan termination, as required by section 4041(a)(2) of the Act and § 2616.22 of this subchapter.

* * * * *

Proposed termination date means the date specified as such by the plan administrator in a notice of intent to terminate or, if later, in the distress termination notice, in accordance with section 4041 of the Act and part 2616 of this subchapter.

Section 4062(b) liability means, with respect to a single-employer plan terminated under section 4041(c) or section 4042 of the Act, the joint and several liability to the PBGC which is incurred by any person that, on the termination date, is a contributing sponsor of the plan or a member of a contributing sponsor's controlled group; the amount of this liability is determined in accordance with section 4062(b)(1) of the Act and § 2622.3(a) of this part.

Single-employer plan means any defined benefit plan (as defined in section 3(35) of the Act) that is not a multiemployer plan (as defined in section 4001(a)(3) of the Act).

Termination date means the date established pursuant to section 4048(a) of the Act.

§ 2622.3 [Amended]

48. Section 2622.3 is revised to read as follows:

§ 2622.3 Amount and payment of section 4062(b) liability.

(a) Amount of liability. (1) General rule. Except as provided in paragraph (a)(2) of this section, the amount of section 4062(b) liability is the total amount (as of the termination date) of the unfunded benefit liabilities (within the meaning of section 4001(a)(18) of the Act) to all participants and beneficiaries under the plan, together with interest calculated from the termination date in accordance with § 2622.7.

(2) Special rule in case of subsequent finding of inability to pay guaranteed benefits. In any distress termination proceeding under section 4041(c) of the Act and part 2616 of this subchapter in which (as described in section 4041(c)(3)(C)(ii) of the Act), after a determination that the plan is sufficient for benefit liabilities or for guaranteed benefits (as defined in § 2616.2 of this subchapter), the plan administrator finds that the plan is or will be insufficient for guaranteed benefits and the PBGC concurs with that finding, or the PBGC makes such a finding on its own initiative, actuarial present values shall be determined as of the date of the notice to, or the finding by, the PBGC of insufficiency for guaranteed benefits.

(b) Payment of liability. Section 4062(b) liability is due and payable as of the termination date, in cash or securities acceptable to the PBGC, except that, as provided in § 2622.8(c), the PBGC shall prescribe commercially reasonable terms for payment of so much of such liability as exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination, and the PBGC may make alternative arrangements, as provided in § 2622.8(b).

49. The title and paragraph (a) of § 2622.4 are revised to read as follows:

§ 2622.4 Determinations of net worth and collective net worth.

(a) General rules. When a contributing sponsor, or member(s) of a contributing sponsor's controlled group, notifies and submits information to the PBGC in accordance with § 2622.6, the PBGC shall determine the net worth, as of the net worth record date, of that contributing sponsor and any members of its controlled group based on the factors set forth in paragraph (c) of this section and shall include the value of any assets that it determines, pursuant to paragraph (d) of this section, have been improperly transferred. In making such determinations, the PBGC will consider information submitted pursuant to § 2622.6. The PBGC shall then determine the collective net worth of persons subject to liability in connection with a plan termination.

* * * * *

50. Paragraphs (b) through (d) of § 2622.4 are amended by removing "an employer" each time it appears and adding, in its place, "a person"; by removing "An employer's" in the introductory text of paragraph (c) and the first sentence of paragraph (d) and adding, in its place, "A person's"; by removing "the employer's" each time it appears and adding, in its place, "the person's"; by removing "the employer" each time it appears and adding, in its place, "the person"; by removing "net record" in paragraph (c)(3) and adding, in its place, "net worth record"; by removing "The employer's" in paragraph (c)(5) and adding, in its place, "The person's"; by removing "proceeding under chapter 11 of the Bankruptcy Code of 1978 (or under chapter XI of the prior Bankruptcy Act)" in paragraph (c)(8) and adding, in its place, "case under title 11, United States Code, or any similar law of a state or political subdivision thereof"; and by removing "employer liability" in the first sentence of paragraph (d) and adding, in its place, "liability". As so revised, paragraphs (b) and (c) and the first sentence of paragraph (d) read as follows:

§ 2622.4 Determinations of net worth and collective net worth.

* * * * *

(b) Partnerships and sole proprietorships. In the case of a person that is a partnership or a sole proprietorship, net worth does not include the personal assets and liabilities of the partners or sole proprietor, except for the assets included pursuant to paragraph (d) of this section. As used in this paragraph, "personal assets" are those assets which do not produce income for the business being valued or are not used in the business.

(c) Factors for determining net worth. A person's net worth is equal to its fair market value and fair market value shall be determined on the basis of the factors set forth below, to the extent relevant; different factors may be considered with respect to different portions of the person's operations.

(1) A bona fide sale of, agreement to sell, or offer to purchase or sell the business of the person made on or about the net worth record date.

(2) A bona fide sale of, agreement to sell, or offer to purchase or sell stock or a partnership interest in the person, made on or about the net worth record date.

(3) If stock in the person is publicly-traded, the price of such stock on or about the net worth record date.

(4) the price/earnings ratios and prices of stocks of similar trades or businesses on or about the net worth record date.

(5) The person's economic outlook, as reflected by its earnings and dividend projections, current financial condition, and business history.

(6) The economic outlook for the person's industry and the market it serves.

(7) The appraised value, including the liquidating value, of the person's tangible and intangible assets.

(8) The value of the equity assumed in a plan of reorganization of a person in a case under title 11, United States Code, or any similar law of a state or political subdivision thereof.

(9) Any other factor relevant in determining the person's net worth.

(d) Improper transfers. A person's net worth shall include the value of any assets transferred by the person which the PBGC determines were improperly transferred for the purpose, as inferred from all the facts and circumstances, and with the effect of avoiding liability under this part. * * *

§ 2622.5 [Amended]

51. Paragraph (a) of § 2622.5 is amended by removing "date of plan termination established pursuant to section 4048 of the Act" and adding, in its place, "'plan's termination date".

52. Paragraph (b) of § 2622.5 is amended by removing everything in the first sentence after "establish" and before the period and adding, in its place, "as the net worth record date an earlier date during the 120-day period ending with the termination date."

53. Paragraph (c) of § 2622.5 is amended by removing "to the employer" in the heading; by removing "the employer" in the first sentence and adding, in its place, "liable person(s)"; and by removing "more information pursuant to § 2622.6(b)" in the second sentence and adding, in its place, "additional information, as provided in § 2622.6(a)(3).

§ 2622.6 [Amended]

54. In § 2622.6, paragraphs (a)(1) through (a)(7) are redesignated as paragraphs (b)(1) through (b)(7), in that order; the introductory text of paragraph (a) is designated as paragraphs (a)(1) through (a)(4) and revised and the introductory text of paragraph (b) is revised; redesignated paragraphs (b)(1) through (b)(7) are amended by removing "The employer's" and adding, in its place, "An" and by removing "its" and adding, in its place, "the person's" in paragraph (b)(1); by removing "five (5)" and adding in its place, "5" and by removing ", and be" and adding, in its place, "and must be" in paragraph (b)(2); by removing "employers" and adding, in its place "person's" in paragraphs (b)(2), (b)(4), (b)(5), and (b)(6); removing "employer" both times it appears and adding, in its place, "the person's" in paragraph (b)(3); and by removing "proceeding under chapter 11 of the Bankruptcy Code of 1978 (or under chapter XI of the prior Bankruptcy Act)" and adding, in its place, "case under title 11, United States Code, or any similar law of a state or political subdivision thereof,", by removing "employer" and adding, in its place, "person", and by removing "five (5)" and adding, in its place, "5" in paragraph (b)(7); and paragraph (c) is revised. As so revised, § 2622.6 reads as follows:

§ 2622.6 Net worth notification and information.

(a) *General.* (1) A contribution sponsor or member of the contributing sponsor's controlled group that believes section 4062(b) liability exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination shall—

(i) So notify the PBGC by the 90th day after the notice of intent to terminate is filed with the PBGC or, if no notice of intent to terminate is filed with the PBGC and the PBGC institutes proceedings under section 4042 of the Act, within 30 days after the establishment of the plan's termination date in such proceedings; and

(ii) Submit to the PBGC the information specified in paragraph (b) of this section with respect to the contributing sponsor and each member of the contributing sponsor's controlled group (if any)—

(A) By the 120th day after the proposed termination date, or

(B) If no notice of intent to terminate is filed with the PBGC and the PBGC institutes proceedings under section 4042 of the Act, within 120 days after the establishment of the plan's termination date in such proceedings.

(2) If a contributing sponsor or a member of the contributing sponsor's controlled group complies with the requirements of paragraph (a)(1) of this section, the PBGC will consider the requirements to be satisfied by all members of that controlled group.

(3) The PBGC may require any person subject to liability—

(i) To submit the information specified in paragraph (b) of this section within a shorter period whenever the PBGC believes that its ability to obtain information or payment of liability is in jeopardy, and

(ii) To submit additional information within 30 days, or a different specified time, after the PBGC's written notification that it needs such information to make net worth determinations.

(4) If a provision of paragraph (b) of this section or a PBGC notice specifies information previously submitted to the PBGC, a person may respond by identifying the previous submission in which the response was provided.

(b) *Net worth information.* The following information specifications apply, individually, with respect to each person subject to liability:

(1) An estimate, made in accordance with § 2622.4, of the person's net worth on the net worth record date and a statement, with supporting evidence, of the basis for the estimate.

(2) A copy of the person's audited (or if not available, unaudited) financial statements for the 5 full fiscal years plus any partial fiscal year preceding the net worth record date. The statements must include balance sheets, income statements, and statements of changes in financial position and must be accompanied by the annual reports, if available.

(3) A statement of all sales and copies of all offers or agreements to buy or sell at least 25 percent of the person's assets or at least 5 percent of the person's stock or partnership interest, made on or about the net worth record date.

(4) A statement of the person's current financial condition and business history.

(5) A statement of the person's business plans, including projected earnings and, if available, dividend projections.

(6) Any appraisal of the person's fixed and intangible assets made on or about the net worth record date.

(7) A copy of any plan of reorganization, whether or not confirmed, with respect to a case under title 11, United States Code, or any similar law of a state or political subdivision thereof, involving the person and occurring within 5 calendar years prior to or any time after the net worth record date.

(c) Incomplete submission. If a contributing sponsor and/or members of the contributing sponsor's controlled group do not submit all of the information required pursuant to paragraph (a) of this section (other than the estimate described in paragraph (b)(1) of this section) with respect to each person subject to liability, the PBGC may base determinations of net worth and the collective net worth of persons subject to liability in connection with a plan termination on any such information that such person(s) did submit, as well as any other pertinent information that the PBGC may have. In general, the PBGC will view information as of a date further remove from the net worth record date as having less probative value than information as of a date nearer to the net worth record date.

55. In § 2622.7, paragraph (d) is removed and the title and paragraphs (a) and (b) are revised to read as follows:

§ 2622.7 Calculating interest on liability and refunds of overpayments.

(a) Interest. Whether or not the PBGC has granted deferred payment terms pursuant to § 2622.8, the amount of

liability under this part includes interest, from the termination date, on any unpaid portion of the liability. Such interest accrues at the rate set forth in paragraph (c) of this section until the liability is paid in full and is compounded daily. When liability under this part is paid in more than one payment, the PBGC will apply each payment to the satisfaction of accrued interest and then to the reduction of principal.

(b) Refunds. If a contributing sponsor or member(s) of a contributing sponsor's controlled group pays the PBGC an amount that exceeds the full amount of liability under this part, the PBGC shall refund the excess amount, with interest at the rate set forth in paragraph (c) of this section. Interest on an overpayment accrues from the later of the date of the overpayment or 10 days prior to the termination date until the date of the refund and is compounded daily.

* * * * *

56. In paragraph (c) of § 2622.7, the first sentence is amended by removing "employer liability and refunds of employer liability" and adding, in its place, "liability under this part and refunds thereof" and by removing "Internal Revenue Code of 1954, as amended," and adding in its place, "Code".

57. The title and paragraphs (a), (b), (c), and (d) of § 2622.8 are revised to read as follows:

§ 2622.8 Arrangements for satisfying liability.

(a) General. The PBGC will defer payment, or agree to other arrangements for the satisfaction, of any portion of liability to the PBGC only when—

(1) As provided in paragraph (b) of this section, the PBGC determines that such action is necessary to avoid the imposition of a severe hardship and that there is a reasonable possibility that the terms so prescribed will be met and the entire liability paid; or

(2) As provided in paragraph (c) of this section, the PBGC determines that section 4062(b) liability exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination.

(b) Upon request. If the PBGC determines that such action is necessary to avoid the imposition of a severe hardship on persons that are or may become liable under section 4062, 4063, or 4064 of the Act and that there is a reasonable possibility that persons so liable will be able to meet the terms prescribed and pay the entire liability, the PBGC may, in its discretion and when so requested in accordance with paragraph (b)(2) of this section, grant deferred payment or other terms for the satisfaction of such liability.

(1) In determining what, if any, terms to grant, the PBGC shall examine the following factors:

(i) The ratio of the liability to the net worth of the person making the request and (if different) to the collective net worth of persons subject to liability in connection with a plan termination.

(ii) The overall financial condition of persons that are or may become liable, including, with respect to each such person—

(A) The amounts and terms of existing debts;

(B) The amount and availability of liquid assets;

(C) Current and past cash flow; and

(D) Projected cash flow, including a projection of the impact on operations that would be caused by the immediate full payment of the liability.

(iii) The availability of credit from private sector sources to the person making the request and to other liable persons.

(2) A contributing sponsor or member of a contributing sponsor's controlled group may request deferred payment or other terms for the satisfaction of any portion of the liability under section 4062, 4063, or 4064 of the Act at any time by filing a written request. The request must include the information specified in § 2622.6(b), except that—

(i) If the request is filed one year or more after the net worth record date, references to "the net worth record date" in § 2622.6(b) shall be replaced by "the most recent annual anniversary of the net worth record date"; and

(ii) Information that already has been submitted to the PBGC need not be submitted again.

(c) Liability exceeding 30 percent of collective net worth. If the PBGC determines that section 4062(b) liability exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination, the PBGC will, after making a reasonable effort to reach agreement with such persons, prescribe commercially reasonable terms for payment of so much of the liability as exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination. The terms prescribed by the PBGC for payment of that portion of the liability (including interest) will provide for deferral of 50 percent of any amount otherwise payable for any year if a person subject to such liability demonstrates to the satisfaction of the PBGC that no person subject to such liability has any individual pre-tax profits (within the meaning of section 4062(d)(2) of the Act) for such person's last full fiscal year ending during that year.

(d) Interest. Interest on unpaid liability is calculated in accordance with § 2622.7(a).

* * * * *

58. Paragraph (e) of § 2622.8 is amended by removing "an employer" and adding, in its place, "the liable person(s)".

§ 2622.9 [Amended]

59. The title of § 2622.9 is amended by removing "lien for employer liability" and adding, in its place, "demand for liability; lien".

60. In paragraph (a) of § 2622.9, the first sentence is amended by removing "an employer's liability" and adding, in its place, "the liability", by removing "PBGC shall"and adding, in its place, "the PBGC shall", and by removing "the employer" and adding, in its place, "liable person(s)"; the second sentence is amended by adding "and will indicate that, as provided in § 2622.8, the PBGC will prescribe commercially reasonable terms for payment of so much of the liability as it determines exceeds 30 percent of the collective net worth or persons subject to liability in connection with a plan termination" at the end before the period; and the last sentence is amended by removing "employer's. As so revised, paragraph (a) reads as follows:

§ 2622.9 Notification of and demand for liability; lien.

(a) Notification of liability. Except as provided in paragraph (c) of this section, when the PBGC has determined the amount of the liability under this part and whether or not the liability has already been paid, the PBGC shall notify liable person(s) in writing of the amount of the liability. If the full liability has not yet been paid, the notification will include a request for payment of the full liability and will indicate that, as provided in § 2622.8, the PBGC will prescribe commercially reasonable terms for payment of so much of the liability as it determines exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination. In all cases, the notification will include a statement of the right to appeal the assessment of liability pursuant to Part 2606 of this chapter.

* * * * *

61. Paragraph (b) of § 2622.9 is amended by removing "If the employer fails to pay its" and adding, in its place, "Except as provided in paragraph (c) of this section, if person(s) liable to the PBGC fail to pay the" and by adding as

concluding text of paragraph (b): "The demand letter will indicate that, as provided in § 2622.8, the PBGC will prescribe commercially reasonable terms for payment of so much of the liability as it determines exceeds 30 percent of the collective net worth of persons subject to liability in connection with a plan termination." As so revised, the introductory text of paragraph (b) reads as follows:

* * * * *

(b) Demand for liability. Except as provided in paragraph (c) of this section, if person(s) liable to the PBGC fail to pay the full liability and no appeal is filed or an appeal is filed and the decision on appeal finds liability, the PBGC will issue a demand letter for the liability——

* * * * *

62. In paragraph (c) of § 2622.9, the first sentence is amended by removing "an employer's after "payment of" and by removing "for an employer's liability" and adding, in its place, "for the liability"; and the last sentence is amended by removing "to appeal of the assessment of liability"and adding, in its place, "to an appeal".

63. Paragraph (d) of § 2622.9 is amended by removing "If the employer" and adding, in its place, "If any person liable to the PBGC under section 4062, 4063, or 4064 of the Act"; by removing "its liability" and adding, in its place, "such liability"; and by removing everything after "arising as of the" and before the period and adding, in its place, "plan's termination date, upon all property and rights to property, whether real or personal, belonging to that person, except that such lien may not be in an amount in excess of 30 percent of the collective net worth of all persons described in section 4062(a) of the Act". As so revised, paragraph (D) reads as follows:

* * * * *

(d) Lien. If any person liable to the PBGC under section 4062, 4063, or 4064 of the Act fails or refuses to pay the full amount of such liability within the time specified in the demand letter, the PBGC shall have a lien in the amount of the liability, including interest, arising as of the plan's termination date, upon all property and rights to property, whether real or personal, belonging to that person, except that such lien may not be in an amount in excess of 30 percent of the collective net worth of all persons described in section 4062(a) of the Act.

§ 2622.10 [Amended]

64. Paragraph (a) of § 2622.10 is amended by adding "(including information)" after "document" in the introductory text.

65. In paragraph (b) of § 2622.10, the first sentence is amended by removing "employer"; by removing", and shall be sent to the Division of the Treasurer, Office of Financial Operations" and adding, in its place,". Such payments shall be sent to the address specified in the notification or demand for liability issued by the PBGC under § 2622.9 or, if not so specified, to the address provided, upon request, by the Investment Management Division (Code 33500)"; and by adding "(202–778–8802)" at the end before the period; and the second sentence is amended by adding "(including information)" after "document" and by removing "Office of Program Operations" and adding, in its place, "Insurance Operations Department (Code 41000)". As so revised, the first two sentences of paragraph (b) read as follows:

§ 2622.10 Filing of documents.

* * * * *

(b) Where to file. Payments of liability shall be clearly designated as such and include the name of the plan. Such payments shall be sent to the address specified in the notification or demand for liability issued by the PBGC under § 2622.9 or, if not so specified, to the address provided, upon request, by the Investment Management Division (Code 33500), Pension Benefit Guaranty Corporation, 2020 K Street, N.W., Washington, DC 20006 (202–778–8802). Any document (including information) required or permitted to be filed under this part, except for documents relating to appeals, shall be submitted to the Insurance Operations Department (Code 41000), Pension Benefit Guaranty Corporation, at the above address. * * *

PART 2623—BENEFIT REDUCTIONS IN TERMINATING PLANS; RECOUPMENT AND REIMBURSEMENT

66. The authority citation for Part 2623 is revised to read as follows:

Authority: 29 U.S.C. 1302(b)(3), 1322, 1322b, 1341(c)(3)(D), and 1344.

67. The title of part 2623 is revised as set forth above.

68. Section 2623.1 is revised to read as follows:

§ 2623.1 Purpose and scope.

(a) Purpose. The purpose of this part is to prescribe procedures that minimize the overpayment of benefits by plan administrators when terminating single-employer plans are not expected to be sufficient for guaranteed benefits and procedures for the recoupment of benefit overpayments from participants and beneficiaries entitled to annuities and the reimbursement of benefit underpayments to participants and beneficiaries in PBGC-trusteed plans.

(b) Scope. Subpart B of this part sets forth the rules for reducing benefit payments after initiating a distress termination; subpart C of this part sets forth the method of recoupment of benefit payments in excess of the amounts permitted under sections 4022, 4022B, and 4044 of the Act and provides for reimbursement of benefit underpayments.

§ 2623.2 [Amended]

69. Section 2623.2 is amended by removing the definitions of insufficient plan, Title IV Benefit, section 4041(a) date of termination, and section 4048 date of termination and by adding, in alphabetical order, definitions of distress termination, guaranteed benefit, notice of intent to terminate, PBGC–trusteed plan, proposed termination date, single-employer plan, sufficient for guaranteed benefits, termination date, and title IV benefit to read as follows:

§ 2623.2 Definitions.

* * * * *

Distress termination means the voluntary termination, in accordance with section 4041(c) of the Act and part 2616 of this subchapter, of a single-employer plan.

Guaranteed benefit means a benefit that is guaranteed by the PBGC under section 4022(a) and (b) of the Act and Parts 2613 and 2621 of this chapter.

Notice of intent to terminate means the notice to affected parties advising each of a proposed plan termination, as required by section 4041(a)(2) of the Act and § 2616.22 or § 2617.22 of this subchapter.

* * * * *

PBGC-trusteed plan means a terminated plan for which the PBGC is appointed trustee under section 4042 of the Act.

Proposed termination date means the date specified as such by the plan administrator in a notice of intent to terminate or, if later, in the distress termination notice or the standard termination notice, in accordance with section 4041 of the Act and part 2616 or part 2617 of this subchapter.

Single-employer plan means any defined benefit plan (as defined in section 3(35) of the Act) that is not a multiemployer plan (as defined in section 4001(a)(3) of the Act).

* * * * *

Sufficient for guaranteed benefits means that there is no amount of unfunded guaranteed benefits (within

the meaning of section 4001(a)(17) of the Act).

Termination date means the date established pursuant to section 4048(a) of the Act.

Title IV benefit means the guaranteed benefit plus any additional benefits to which plan assets are allocated pursuant to section 4044 of the Act and part 2618 of this subchapter.

§ 2623.5 [Amended]

70. The title of § 2623.5 is amended by removing "benefits payable" and adding, in its place, "benefit payments".

71. Paragraph (a) of § 2623.5 is revised to read as follows:

§ 2623.5 Limitations on benefit payments by plan administrator.

(a) General. When, during the pendency of a distress termination proceeding, § 2616.4 of this subchapter requires a plan administrator to reduce benefits, the plan administrator shall limit benefit payments in accordance with this section.

* * * * *

72. Paragraph (b) of § 2623.5 is amended by removing "beginning on the section 4041(a) date of termination" in the first sentence and by adding "or her" after "his" in the second sentence.

73. Paragraph (c) of § 2623.5 is amended by removing "beginning on the section 4041(a) date of termination"; by removing "chapter" and adding, in its place "subchapter"; and by adding ", for the year of the proposed termination date" at the end before the period.

74. Paragraph (d) of § 2623.5 is amended by adding "payments" after "benefit" in the heading and by removing "Beginning on the thirtieth day after the section 4041(a) date of termination, or on the section 4041(a) date of termination if the Notice of Intent to Terminate proposes a date of termination that is more than thirty days after the Notice of Intent to Terminate was filed, a" and adding, in its place, "A".

75. Paragraph (3) of § 2623.5 is removed.

76. Paragraph (f) of § 2623.5 is amended by removing "deadlines and" in the heading; by removing subparagraph (1); by removing the colon after "may" in the introductory text; by removing the designation of paragraph (f)(2) and the word "Authorize" and adding, in its place, "authorize" and, as so amended, paragraph (f) is redesignated as paragraph (e).

77. Paragraph (g) of § 2623.5 is redesignated as paragraph (f) and the examples following the introductory text are revised in their entirety to read as follows:

* * * * *

(f) * * *

Example 1

Facts. On October 10, 1992, a plan administrator files with the PBGC a notice of intent to terminate in a distress termination that includes December 31, 1992, as the proposed termination date. A participant who is in pay status on December 31, 1992, has been receiving his accrued benefit of $2,500 per month under the plan. The benefit is in the form of a joint and survivor annuity (contingent basis) that will pay 50 percent of the participant's benefit amount (*i.e.*, $1,250 per month) to his surviving spouse following the death of the participant. On December 31, 1992, the participant is age 66, and his wife is age 56.

Benefit reductions. Paragraph (b) of this section requires the plan administrator to cease paying benefits in excess of the accrued benefit payable at normal retirement age. Because the participant is receiving only his accrued benefit, no reduction is required under paragraph (b).

Paragraph (c) of this section requires the plan administrator to cease paying benefits in excess of the maximum guaranteeable benefit, adjusted for age and benefit form in accordance with the provisions of Part 2621 of this subchapter. The maximum guaranteeable benefit for plans terminating in 1992, the year of the proposed termination date, is $2,352.27 per month, payable in the form of a single life annuity at age 65. Because the participant is older than age 65, no adjustment is required under § 2621.4(c) based on the annuitant's age factor. The benefit form is a joint and survivor annuity (contingent basis), as defined in § 2621.2. The required benefit reduction for this benefit form under § 2621.4(d) is 10 percent. The corresponding adjustment factor is 0.90 (1.00–0.10). The benefit reduction factor to adjust for the age difference between the participant and the beneficiary is computed under § 2621.4(e). In computing the difference in ages, years over 65 years of age are not taken into account. Therefore, the age difference is 9 years (65–56). The required percentage reduction when the beneficiary is 9 years younger than the participant is 9 percent. The corresponding adjustment factor is 0.91 (1.00–0.09).

The maximum guaranteeable benefit adjusted for age and benefit form is $1,926.51 ($2,352.27x0.90x0.91) per month. Therefore, the plan administrator must reduce the participant's benefit payment from $2,500 to $1,926.51. If the participant dies after December 31, 1992, the plan administrator will pay his spouse $963.26 (0.50x$1,926.51) per month.

Example 2

Facts. The benefit of a participant who retired under a plan at age 60 is a reduced single life annuity of $400 per month plus a temporary supplement of $400 per month payable until age 62 (*i.e.*, a step-down benefit). The participant's accrued benefit under the plan is $450 per month, payable from the plan's normal retirement age. On the proposed termination date, June 30, 1992, the participant is 61 years old.

The maximum guaranteeable benefit adjusted for age under § 2621.4(c) of this subchapter is $1,693.63 ($2,352.27×0.72) per month. Since the benefit is payable as a single life annuity, no adjustment is required under § 2621.4(d) for benefit form.

Benefit reductions. The plan benefit of $800 per month payable until age 62 exceeds the participant's accrued benefit at normal requirement age of $450 per month. Paragraph (b) of this section requires that, except to the extent permitted by paragraph (d), the plan benefit must be reduced to $450 per month. Since the levelized benefit of $404.10 ((0.082×50)+$400) per month, determined under § 2621.4(f), is less than the adjusted maximum guaranteeable benefit of $1,693.63 per month, no further reduction in the $450 per month benefit payment is required under paragraph (c) of this section. The plan administrator next would determine the amount of the participant's estimated benefit under paragraph (d).

Example 3

Facts. A retired participant is receiving a reduced early retirement benefit of $1,100 per month plus a temporary supplement of $700 per month payable until age 62. The benefit is in the form of a single life annuity. On the proposed termination date, November 30, 1992, the participant is 56 years old.

The participant's accrued benefit at normal retirement age under the plan is $1,200 per month. The maximum guaranteeable benefit adjusted for age is $1,152.61 ($2,353.27×0.49) per month. A form adjustment is not required.

Benefit reductions. The plan benefit of $1,800 per month payable from age 56 to age 62 exceeds the participant's accrued benefit at normal retirement age of $1,200 per month. Therefore, under paragraph (b) of this section, the plan administrator must reduce the temporary supplement to $100 per month.

For the purpose of determining whether the reduced benefit, *i.e.*, a level-life annuity of $1,100 per month and a temporary annuity supplement of $100 per month to age 62, exceeds the maximum guaranteeable benefit adjusted for age, the temporary annuity supplement of $100 per month is converted to a level-life annuity equivalent in accordance with § 2621.4(f) of this subchapter. The level-life annuity equivalent is $38.70 ($100×0.387). This, added to the life annuity of $1,100 per month, equals

$1,138.70. Since the maximum guaranteeable benefit of $1,152.61 per month exceeds $1,138.70 per month, no further reduction is required under paragraph (c) of this section.

The plan administrator next would determine the participant's estimated benefit under paragraph (d). Assume that the estimated benefit under paragraph (d) is $780 per month until age 62 and $715 per month thereafter. The plan administrator would pay the participant $780 per month, reduced to $715 per month at age 62, subject to the final benefit determination made under title IV.

Example 4

Facts. A retired participant is receiving a reduced early retirement benefit of $2,650 per month plus a temporary supplement of $800 per month payable until age 62. The benefit is in the form of a joint and survivor annuity (contingent basis) that will pay 50 percent of the participant's benefit amount to his surviving spouse following the death of the participant. On the proposed termination date, December 20, 1992, the participant and his spouse are each 56 years old.

The participant's accrued benefit at normal retirement age under the plan is $3,000 per month. The maximum guaranteeable benefit adjusted for age and the joint and survivor annuity (contingent basis) annuity form is $1,037.35 per month. An adjustment for age difference is not required because the participant and his spouse are the same age.

Benefit reductions. The plan benefit of $3,450 per month payable from age 56 to age 62 exceeds the participant's accrued benefit at normal retirement age, which is $3,000 per month. Therefore, under paragraph (b) of this section, the plan administrator must reduce the participant's benefit so that it does not exceed $3,000 per month.

The level-life equivalent of the participant's reduced benefit, determined using the § 2621.4(f) adjustment factor, is $2,785.45 (($350×0.387)+$2,650) per month. Since this benefit exceeds the participant's maximum guaranteeable benefit of $1,037.35 per month, the plan administrator must reduce the participant's benefit payment so that it does not exceed the maximum guaranteeable benefit.

The ratio of (i) the participant's maximum guaranteeable benefit to (ii) the level-life equivalent of the participant's reduced benefit (computed under the "accrued for normal retirement age" limitation) is used in converting the level-life maximum guaranteeable benefit to the step-down benefit form. The level-life equivalent of the reduced benefit computed under the "accrued for normal retirement age" limitation is 37.24 percent ($1,037.35/$2,785.45). Thus, the plan administrator must reduce the participant's level-life benefit of $2,650 per month to $986.86 ($2,650×0.3724) and must further reduce the reduced temporary benefit of $350 per month to $130.34 ($350×0.3724). Under paragraph (c) of this section, therefore, the participant's maximum guaranteeable benefit is $1,117.20 ($986.86+$130.34) per month to age 62 and $986.86 per month thereafter, subject to any adjustment under paragraph (d) of this section.

Assume that the estimated benefit under paragraph (d) is $1,005.48 per month to age 62 and $888.17 per month thereafter. The plan administrator would reduce the participant's benefit from $3,450 per month to $1,005.48 per month and pay this amount until age 62, at which time the benefit payment would be reduced to $888.17 per month, subject to the final benefit determination made under title IV.

§ 2623.6 [Amended]

78. Paragraph (a) of § 2623.6 is amended by removing the last sentence.

79. Paragraph (b) of § 2623.6 is amended by removing "section 4041(a) date of termination" each time it appears (in the heading or the text) and adding, in its place, "proposed termination date"; by removing "was" and adding, in its place, "is" in paragraph (b)(1); and by adding "or her" after "his" in paragraph (b)(2).

80. Paragraph (c) of § 2623.6 is amended by adding "or her" after "his" both times it appears in paragraph (c)(1); by adding "or she"after "he" each time it appears; and by removing "section 4041(a) date of termination" each time it appears in paragraph (c)(2) and paragraph (c)(3) and adding, in its place, "proposed termination date".

81. Paragraph (d) of § 2623.6 is amended by removing "section 4041(a) date of termination" each time it appears and adding, in its place, "proposed termination date" and by adding "or she" after "he" and "or her" after "his" in paragraph (d)(2)(ii).

82. The examples in paragraph (e) of § 2623.6 are revised to read as follows:

§ 2623.6 Estimated guaranteed benefit.

* * * * *

(e) * * *

Example 1

Facts. A participant who is not a substantial owner retired on December 31, 1991, at age 60 and began receiving a benefit of $600 per month. On January 1, 1989, the plan had been amended to allow participants to retire with unreduced benefits at age 60. Previously, a participant who retired before age 65 was subject to a reduction of 1/15th for each year by which his or her actual retirement age preceded age 65. On January 1, 1992, the plan's benefit formula was amended to increase benefits for participants who retired before January 1, 1992. As a result, the participant's benefit was increased to $750 per month. There have been no other pertinent amendments. The proposed termination date is December 15, 1992.

Estimated guaranteed benefit. No reduction is required under § 2623.5 (b) or (c) because the participant's benefit does not exceed either the participant's accrued benefit at normal retirement age or the maximum guaranteeable benefit. (Post-retirement benefit increases are not considered as increasing accrued benefits payable at normal retirement age.)

The amendment as of January 1, 1989, resulted in a "new benefit" because the reduction in the age at which the participant could receive unreduced benefits increased the participant's benefit entitlement at actual retirement age by 5/15, which is more than a 20 percent increase. The amendment of January 1, 1992, which increased the participant's benefit to $750 per month, is a "benefit improvement" because it is an increase in the amount of benefit for persons in pay status. (No percentage test applies in determining whether such an increase is a benefit improvement.)

The multiplier for computing the amount of the estimated guaranteed benefit is taken from the third row of Table I (because the last new benefit had been in effect for 3 full years as of the proposed termination date) and column (c) (because there was a benefit improvement within the 1-year period preceding the proposed termination date). This multiplier is 0.55. Therefore, the amount of the participant's estimated guaranteed benefit is $412.50 (0.55 × $750) per month.

Example 2

Facts. A participant who is not a substantial owner terminated employment on December 31, 1990. On January 1, 1992, she reached age 65 and began receiving a benefit or $250 per month. She had completed 3 years of service at her termination of employment and was fully vested in her accrued benefit. The plan's vesting schedule had been amended on July 1, 1988. Under the schedule in effect before the amendment, a participant with 5 years of service was 100 percent vested. There have been no other pertinent amendments. The proposed termination date is December 31, 1992.

Estimated guaranteed benefit. No reduction is required under § 2623.5 (b) or (c) because the participant's benefit does not exceed either her accrued benefit at normal retirement age or the maximum guaranteeable benefit. The plan's change of vesting schedule created a new benefit for the participant. Because the amendment was in effect for 4 full years before the proposed termination date, the second row of Table I is used to determine the applicable multiplier for estimating the amount of the

participant's guaranteed benefit. Because the participant did not receive any benefit improvement during the 12-month period ending on the proposed termination date, column (b) of the table is used. Therefore, the multiplier is 0.80, and the amount of the participant's estimated guaranteed benefit is $200 (0.80 × $250) per month.

Example 3

Facts. A participant who is a substantial owner retired prior to the proposed termination date after 5½ years of active participation in the plan. The benefit under the terms of the plan when he first began active participation was $800 per month. On the proposed termination date of April 30, 1992, he was entitled to receive a benefit of $2000 per month. No reduction of this benefit is required under § 2623.5 (b) or (c).

Estimated guaranteed benefit. Paragraph (d)(2) of this section is used to compute the amount of the estimated guaranteed benefit of substantial owners with 5 or more years of active participation prior to the proposed termination date. Consequently, the amount of this participant's estimated guaranteed benefit is the lesser of—

(i) the amount calculated as if he had been an active participant in the plan for fewer than 5 full years on the proposed termination date, or $333.33 ($2000 × 5/30) per month, or

(ii) the amount to which he would have been entitled as of the proposed termination date under the terms of the plan when he first began participation, as limited by § 2623.5 (b) and (c), multiplied by 2 times the number of years of active participation and divided by 30, or $266.67 ($800 × 2 × 5/30) per month. Therefore, the amount of the participant's estimated guaranteed benefit is $266.67 per month.

§ 2623.7 [Amended]

83. The title of § 2623.7 is amended by removing "Title IV Benefit" and adding, in its place, "title IV benefit".

84. Paragraph (a) of § 2623.7 is amended by removing "Benefit" each time it appears and adding, in its place, "benefit" and by removing the last sentence.

85. Paragraph (b) of § 2623.7 is amended by removing "Benefits" both times it appears in the introductory text and adding, in its place, "benefits" and by removing "section 4041(a) date of termination" each time it appears and adding, in its place, "proposed termination date".

86. Paragraph (c) of § 2623.7 is amended by removing *"Benefit"* in the heading and adding, in its place, *"benefit"*; by removing "Benefit" in the first sentence of the introductory text and adding, in its place, "benefit"; and by removing "section 4041(a) date of termination" each time it appears and adding, in its place, "proposed termination date".

87. Paragraph (d) of § 2623.7 is amended by removing *"Benefit"* in the heading and adding, in its place, *"benefit"* and by adding "or she" after "he" in paragraph (d)(1).

88. The examples in paragraph (e) of § 2623.7 are revised to read as follows:

§ 2623.7 Estimated Title IV benefits.

* * * * *

(e) * * *

Example 1

Facts. A participant who is not a substantial owner was eligible to retire 3½ years before the proposed termination date. The participant retired 2 years before the proposed termination date with 20 years of service. Her final 5 years' average salary was $45,000, and she was entitled to an unreduced early retirement benefit of $1,500 per month payable as a single life annuity. This retirement benefit does not exceed the limitation in § 2623.5(b) or (c).

On the participant's benefit commencement date, the plan provided for a normal retirement benefit of 2 percent of the final 5 years' salary times the number of years of service. Five years before the proposed termination date, the percentage was 1½ percent. The amendments improving benefits were put into effect 3½ years prior to the proposed termination date. There were no other amendments during the 5-year period.

The participant's estimated guaranteed benefit computed under § 2623.6(c) is $1,500 per month times 0.90 (the factor from column (b) of Table I in § 2623.6(c)(2)), or $1,350 per month. It is assumed that the plan meets the conditions set forth in paragraph (b) of this section, and the plan administrator is therefore required to estimate the title IV benefit.

Estimated title IV benefit. For a participant who is not a substantial owner, the amount of the estimated title IV benefit is the estimated priority category 3 benefit computed under paragraph (c) of this section. This amount is computed by multiplying the participant's benefit under the plan as of the later of the proposed termination date or the benefit commencement date by the ratio of (i) the normal retirement benefit under the provisions of the plan in effect 5 years before the proposed termination date and (ii) the normal retirement benefit under the plan provisions in effect on the proposed termination date.

Thus, the numerator of the ratio is the benefit that would be payable to the participant under the normal retirement provisions of the plan 5 years before the proposed termination date, based on her age, service, and compensation on her benefit commencement date. The denominator of the ratio is the benefit that would be payable to the participant under the normal retirement provisions of the plan in effect on the proposed termination date, based on her age, service, and compensation as of the earlier of her benefit commencement date or the proposed termination date. Since the only different factor in the numerator and denominator is the salary percentage, the amount of the estimated title IV benefit is $1,125 (0.015/0.020×$1,500) per month. This amount is less than the estimated guaranteed benefit of $1,350 per month. Therefore, in accordance with § 2623.5(d), the benefit payable to the participant is $1,350 per month.

Example 2

Facts. A participant who is a substantial owner retires at the plan's normal retirement age, having completed 5 years of active participation in the plan, on October 31, 1992, which is the proposed termination date. Under provisions of the plan in effect 5 years prior to the proposed termination date, the participant is entitled to a single life annuity of $500 per month. Under the most recent plan amendments, which were put into effect 1½ years prior to the proposed termination date, the participant is entitled to a single life annuity of $1,000 per month. The participant's estimated guaranteed benefit computed under § 2623.6(d)(2) is $166.67 per month.

It is assumed that all of the conditions in paragraph (b) of this section have been met. Plan assets equal $2 million. The present value of all benefits in pay status is $1.5 million based on applicable PBGC interest rates. There are no employee contributions and the present value of all vested benefits that are not in pay status is $0.75 million based on applicable PBGC interest rates.

Estimated title IV benefit. Paragraph (d) of this section provides that the amount of the estimated title IV benefit payable with respect to a participant who is a substantial owner is the higher of the estimated priority category 3 benefit computed under paragraph (c) of this section or the estimated priority category 4 benefit computed under paragraph (d) of this section.

Under paragraph (c), the participant's estimated priority category 3 benefit is $500 ($1,000×$500/$1000) per month.

Under paragraph (d), the participant's estimated priority category 4 benefit is the estimated guaranteed benefit computed under § 2623.6(c) (*i.e.*, as if the participant were not a substantial owner) multiplied by the priority category 4 funding ratio. Since the plan has priority category 3 benefits, the ratio is determined under paragraph (d)(2)(i). The numerator of the ratio is plan assets minus the present value of benefits in pay status. The denominator of the ratio is the present value of all vested benefits that are not in pay status. The participant's estimated guaranteed benefit under § 2623.6(c) is $1,000 per month times 0.90 (the factor from column (b) of Table I in § 2623.6(c)(2)), or $900 per month. Multiplying $900 by the category 4 funding ratio of 2/3 (($2 million—$1.5 million)/$0.75 million) produces an estimated category 4 benefit of $600 per month.

Because the estimated category 4 benefit so computed is greater than the estimated category 3 benefit so computed, the estimated category 4 benefit is the estimated title IV benefit. Because the estimated category 4 benefit so computed is greater than the estimated guaranteed benefit of $166.67 per month, in accordance with § 2623.5(d), the benefit payable to the participant is the estimated category 4 benefit of $600 per month.

§ 2623.8 [Removed]

89. Section 2623.8 is removed.

§ 2623.11 [Amended]

90. Paragraph (a) of § 2623.11 is amended by removing "terminated insufficient plan" in the first sentence and adding, in its place, "PBGC-trusteed plan"; by removing "he or his" the first time it appears in the first sentence and adding, in its place, "the participant or his or her"; by removing "he or his" the second time it appears in the first sentence and adding, in its place, "the participant or beneficiary"; by removing "recoupment under" and adding, in its place, "recouping in accordance with the rules in" in the second sentence; and by removing "section 4048 date of termination" and adding, in its place, "termination date" in the last sentence.

91. Paragraph (b) of § 2623.11 is amended by removing "terminated insufficient plan" and adding, in its place, "PBGC-trusteed plan" and by removing "he or his" and adding, in its place, "the participant or his or her".

92. Paragraph (c) of § 2623.11 is amended by removing everything after "on or after the latest of" and before "the date on which" and adding, in its place, "the proposed termination date, the termination date, or, if no notice of intent to terminate was issued,".

2623.12 [Amended]

93. Paragraph (a) of § 2623.12 is amended by removing "section 4048 date of termination" in paragraph (a)(1) and adding, in its place, "termination date" and by adding "or her" after "him" in paragraph (a)(3).

Issued in Washington, DC, this 25th day of June, 1993.

Martin Slate,

Executive Director, Pension Benefit Guaranty Corporation.

[FR Doc. 93–15431 Filed 6–30–93; 8:45 am]

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DEPARTMENT OF THE TREASURY

Fiscal Service

31 CFR Part 203

RIN 1510–AA22

Treasury Tax and Loan Depositaries, Depositaries for Federal Taxes

AGENCY: Financial Management Service, Fiscal Service, Treasury.

ACTION: Final rule.

SUMMARY: This document revises the regulations found at 31 CFR part 203, Treasury tax and loan depositaries, to more accurately reflect current practices, expand certain sections to clarify their intent, incorporate related regulations that currently appear in part 214, and correct a number of editorial errors in the text.

EFFECTIVE DATE: August 2, 1993.

FOR FURTHER INFORMATION CONTACT: John P. Galligan, Director of the Cash Management Policy and Planning Division, 401 14th Street, SW., Washington, DC 20227, (202) 874–6590.

SUPPLEMENTARY INFORMATION: The intent of this rule is to amend by revising the regulations to more accurately reflect current practices. The Notice of Proposed Rulemaking was published on October 27, 1992. There are no substantive differences between the proposed rule and the final rule. No comments on the proposed rule were received. The changes being made and the reasons for them are:

1. Amend §§ 203.1 and 214.7(a)(2) by removing references to certain U.S. obligations. Remove §§ 203.5(a), 203.9(c)(1) and 203.9(c)(3). In a news release dated August 29, 1989, Treasury announced depositaries no longer are allowed to credit payment for public debt securities and U.S. Savings Bonds to the note account.

2. Add three new definitions for clarification: § 203.2(c) *Delivery of advices of credit*, § 203.2(d) *Depositary*, and § 203.2(1) *Procedural Instructions for Treasury Tax and Loan Depositaries*. Redesignate the remaining subsections accordingly. Correct the name of the Federal Reserve publication referenced at § 203.2(f) [formerly § 203.2(d)].

3. Revise § 203.2(k) [formerly § 203.2(i)] and § 203.14(a)(2) [formerly § 203.15(a)(2)] relating to collateral for special direct investments (SDIs). The types of collateral eligible for SDIs have been expanded.

4. Remove reference to the Federal Savings and Loan Insurance Corporation at § 203.2(m) [formerly § 203.2(j)] and § 203.3(b)(1)(ii) [formerly § 203.3(b)(1)(i)(B)]. Federal insurance for savings and loans now is provided by the Federal Deposit Insurance Corporation.

5. Revise § 203.3 referring to designation of Treasury tax and loan depositaries to make it more readable.

6. Remove § 203.5(b) and redesignate the regulations governing the processing of Federal tax deposits (FTDs) by depositaries and Federal Reserve Banks at §§ 214.6(a) and 214.7, respectively, as § 203.5. Remove part 214 from title 31. Regulations implemented in November 1978 require depositaries for Federal taxes to credit all Federal tax deposits to a Treasury tax and loan account. This regulatory change made a separate part in the CFR for depositaries for Federal taxes unnecessary.

7. Revise § 203.9 (Note Option) to make it consistent with § 203.10 (Remittance Option), which also is being revised.

8. Revise §§ 203.9(g) [formerly § 203.9(f)] and 203.14(a)(1) [formerly § 203.15(a)(1)] relating to maximum balances and the collateral requirements for note option depositaries. Effective October 3, 1991, note option depositaries are required to establish a maximum balance and, except for depositaries participating in direct investments, note option depositaries must fully collateralize their maximum balance at all times. This action was taken to reduce the number of potential collateral deficiencies, and thereby reduce Treasury's exposure to risk.

9. Remove § 203.10(b)(2)(ii) (analysis credits) and § 203.10(b)(2)(iii) (excessive flow). All Remittance Option depositaries now are treated the same with regard to the assessment of late fees.

10. Remove § 203.11. Redesignate the remaining sections accordingly. All special depositaries have been redesignated as Treasury tax and loan depositaries. Thus, a depositary which, as of the close of business in November 1, 1978, was authorized to maintain a tax and loan account, may elect to administer this account under the Note Option or the Remittance Option. If no election is made, the depositary will be presumed to be administering the account under the Remittance Option.

11. Remove specific collateral values at § 203.14(d) [formerly § 203.15(d)], to provide Treasury and the Federal Reserve more flexibility in valuing certain securities.

12. Remove the reference to the time to maturity of collateral covered at § 203.14(d)(9) [formerly § 203.15(d)(9)], to expand the pool of eligible collateral.

13. Make various corrections to grammar, punctuation, and lettering.

Treasury tax and loan depositaries have been advised of the changes referred to in numbers 1, 3, 8, 9, and 12 above directly by the Federal Reserve Banks. The corresponding sections of the Procedural Instructions for Treasury Tax and Loan Depositaries, issued by the Financial Management Service, have been updated.

This rule is not a major rule for the purpose of Executive Order 12291 of February 17, 1981, and a regulatory impact analysis is not required. As explained above, this revision merely updates and clarifies existing practices. As required by the Regulatory Flexibility Act, it is hereby certified that this rule will not have a significant economic impact on a substantial number of small entities. Accordingly, a

regulatory flexibility analysis is not required. For the reasons previously explained, this revision will have very little or no impact on the way financial institutions affected by it conduct their affairs.

List of Subjects in 31 CFR Part 203

Banks, Banking, Taxes.

For the reasons set out in the preamble, title 31, part 203 of the Code of Federal Regulations, is revised as set forth below.

PART 203—TREASURY TAX AND LOAN DEPOSITARIES

Subpart A—General Information

Sec.
203.1 Scope.
203.2 Definitions.
203.3 Designation of financial institutions as Treasury tax and loan depositaries.
203.4 Sources of deposits.
203.5 Deposits of Federal taxes.
203.6 Parties to the contract.
203.7 Obligations of the depositary.

Subpart B—Options

203.8 General requirement.
203.9 Note option.
203.10 Remittance option.
203.11 Change of options.

Subpart C—Interest and Compensation

203.12 Rate of interest.
203.13 Compensation for services.

Subpart D—Collateral Security

203.14 Collateral security requirements.

Subpart E—Miscellaneous Provisions

203.15 Termination of contract.
203.16 Implementing instructions.
203.17 Effective date.

Authority: 31 U.S.C. 3122, 31 U.S.C. 323, 12 U.S.C. 265 and 12 U.S.C. 391.

Subpart A—General Information

§ 203.1 Scope.

The regulations in this part govern the designation of Treasury tax and loan depositaries and their contract with the Treasury Department to process deposits of Federal taxes and to maintain and administer separate accounts to be known as Treasury tax and loan accounts.

§ 203.2 Definitions.

As used in this part:

(a) *Advices of credit* means those Treasury forms which are supplied to depositaries to be used in supporting credits to Treasury tax and loan accounts.

(b) *Business day* means any day on which the Federal Reserve Bank of the district is open to the public.

(c) *Delivery of advices of credit* to the Federal Reserve Bank means delivery of the paper advice of credit form or electronic delivery by Fedline or Voice Response of the information on the advice of credit form.

(d) *Depositary* means a Treasury tax and loan depositary.

(e) *Election of option form* means a document supplied by the Federal Reserve Bank of each district, on which a depositary indicates the option under which it will administer its Treasury tax and loan account.

(f) *Federal funds rate* means the weekly Federal funds rate as published in the Federal Reserve Statistical Release, "H.15 Selected Interest Rates," which is published weekly by the Board of Governors of the Federal Reserve System.

(g) *Federal Reserve Bank of the district* means the Federal Reserve Bank which services the geographical area in which the depositary is located. Depositaries located in Puerto Rico, the Virgin Islands, and the Panama Canal Zone are included in the Second Federal Reserve District.

(h) *Federal tax deposit form* means a preinscribed form supplied to a taxpayer by the Treasury Department to accompany deposits of Federal taxes.

(i) *Federal taxes* means those Federal taxes specified by the Secretary of the Treasury or the Secretary's delegate as eligible for payment through the procedures prescribed in this part.

(j) *Note Option* means that choice available to a depositary under which funds debited from its Treasury tax and loan account are added by the Treasury to its investments in obligations of the depositary. The amount of such investments will be evidenced by an open-ended interest-bearing note maintained at the Federal Reserve Bank of the district.

(k) *Off premises collateral arrangement* means a collateral custody arrangement established pursuant to § 203.14(c)(2) of this part wherein a depositary is permitted to hold in its possession for the Federal Reserve Bank collateral security for funds invested with the depositary as special direct investments.

(l) *Procedural Instructions for Treasury Tax and Loan Depositaries* means Volume IV of the Treasury Financial Manual, published by the Financial Management Service.

(m) *Recognized insurance coverage* means the insurance provided by the Federal Deposit Insurance Corporation, the National Credit Union Share Insurance Fund and insurance provided by insurance organizations specifically qualified by the Secretary of the Treasury pursuant to 31 CFR part 226.

(n) *Remittance Option* means that choice available to a depositary under which funds equivalent to the amount of deposits credited by the depositary to its Treasury tax and loan account will be withdrawn by the Federal Reserve Bank immediately upon receipt by the Federal Reserve Bank of the advices of credit supporting such deposits.

(o) *Reporting cycle* means the time period established for reporting and computation purposes. A reporting cycle begins on the first Thursday of each month and ends on the Wednesday preceding the first Thursday of the following month.

(p) *Reserve account* means that account every member of the Federal Reserve System maintains at the Federal Reserve Bank of its district for reserve purposes pursuant to 12 CFR part 204.

(q) *Special depositary* means a depositary that had been designated under the provisions of 31 CFR part 203 prior to November 2, 1978. A depositary thereafter designated under this part shall be known as a Treasury tax and loan depositary.

(r) *Special direct investment* means the type of addition to a depositary's note account referred to in § 203.9(d) of this part, where the addition specifically is identified as a "special direct investment" and is secured by collateral retained in the possession of the depositary pursuant to the terms of § 203.14(c)(2) of this part.

§ 203.3 Designation of financial institutions as Treasury tax and loan depositaries.

(a) *Previously authorized depositaries.* A special depositary which, at the close of business on November 1, 1978, was authorized to maintain a Treasury tax and loan account is hereby redesignated as a Treasury tax and loan depositary and subject to the provisions of the current part 203.

(b) *New designations.* In order to be designated as a Treasury tax and loan depositary, a financial institution is required to possess under its charter either general or specific authority permitting the maintenance of the Treasury tax and loan account, the balance of which is payable on demand without previous notice of intended withdrawal. A financial institution also is required to possess the authority to pledge collateral to secure Treasury tax and loan balances.

(1) *Eligible institutions.*

(i) Every incorporated bank and trust company in the United States, Puerto Rico, the Virgin Islands, every United States branch of a foreign banking corporation authorized by the State in which it is located to transact commercial banking business, and every Federal branch of a foreign banking

corporation, the establishment of which has been approved by the Comptroller of the Currency.

(ii) Every financial institution insured by the Federal Deposit Insurance Corporation.

(iii) Every credit union insured by the Administrator of the National Credit Union Administration.

(iv) Every savings and loan, building and loan, homestead association and credit union, created under the laws of any State, the deposits or accounts of which are insured by a State or agency thereof, or by a corporation chartered by a State for the sole purpose of insuring deposits or accounts of such financial institutions.

(2) *Application Procedures.* An eligible financial institution seeking designation as a depositary and, thereby, the authority to maintain a Treasury tax and loan account shall file with the Federal Reserve Bank of the district Financial Management Service Form 458 "Financial Institution Offer to Contract and Application for Designation as a Treasury Tax and Loan Depositary" and Financial Management Service Form 459 "Resolutions Authorizing the Financial Institution Offer to Contract and Application for Designation as a Treasury Tax and Loan Depositary" certified by its board of directors. Financial Management Service Forms 458 and 459 are available upon request from the Federal Reserve Bank of the district.

(3) *Designation.* Each financial institution satisfying the eligibility requirements and the application procedures will receive from the Federal Reserve Bank of the district notification of its specific designation as a Treasury tax and loan depositary. A financial institution is not authorized to maintain a Treasury tax and loan account until it has been designated as a Treasury tax and loan depositary by the Federal Reserve Bank of the district.

§ 203.4 Sources of deposits.

A depositary shall credit to its Treasury tax and loan account deposits of Federal taxes and any public funds due to Treasury from the depositary and authorized by the Secretary of the Treasury by regulation to be paid by crediting the tax and loan account.

§ 203.5 Deposits of Federal taxes.

(a) *Deposits with depositaries.* A depositary shall, through any of its offices that accept deposits:

(1) Accept from a taxpayer cash, a postal money order drawn to the order of the depositary, or a check or draft drawn on and to the order of the depositary, covering an amount to be deposited as Federal taxes when accompanied by a Federal tax deposit form on which the amount of the deposit has been properly entered in the space provided. A depositary may accept, at its discretion, a check drawn on another financial institution, but it does so purely on a voluntary basis and absorbs for its own account any float involved.

(2) Issue a counter receipt when requested to do so by a taxpayer who makes a deposit of Federal taxes in cash over the counter.

(3) Place a stamp impression on the face of each Federal tax deposit form in the space provided, regardless of the form of payment. The stamp shall reflect the date on which the tax deposit was received and the name and location of the depositary. The timeliness of the tax payment will be determined by reference to the date stamp on the Federal tax deposit form.

(4) Credit on the date of receipt all deposits of Federal taxes to the Treasury tax and loan account and administer that account pursuant to the provisions of this part.

(5) Forward each day to the Internal Revenue Service Center servicing the geographical area in which the depositary is located the Federal tax deposit forms for all tax deposits received that day. Each submission of deposit information shall be on the prescribed Treasury form and in the aggregate amount of the Federal tax deposit forms.

(6) Establish an adequate record of all deposits of Federal taxes prior to transmittal to the Internal Revenue Service Center so the depositary will be able to identify deposits in the event tax deposit forms are lost in shipment between it and the Internal Revenue Service Center. For tracking purposes, a record shall be made of each deposit showing as a minimum the date of deposit, the taxpayer's identifying number and the amount of the deposit. The depositary's copies of transmittal letters may be used to provide the necessary information if individual deposits are listed separately showing date, taxpayer's identifying number and amount.

(7) Not accept compensation from taxpayers for accepting deposits of Federal taxes and handling them as required by this section.

(b) *Deposits with Federal Reserve Banks.* A Federal Reserve Bank shall, through any of its offices:

(1) Accept a tax deposit directly from a taxpayer when such tax deposit is:

(i) Mailed or delivered by a taxpayer located within that Bank's territorial boundaries; and

(ii) In the form of cash, a check drawn to the order of that Bank and considered to be an immediate credit item by that Bank, a postal money order drawn to the order of the Bank; and,

(iii) Accompanied by a Federal tax deposit form on which the amount of the tax deposit has been properly entered in the space provided.

(2) When requested to do so by a taxpayer who makes a deposit of Federal taxes in cash over the counter issue a counter receipt.

(3) When a deposit of Federal taxes is made in accordance with the requirements of paragraph (a) of this section, a Bank shall place in the space provided on the face of each Federal tax deposit form accepted directly from a taxpayer, a stamp impression reflecting the name of the Bank and the date on which the tax deposit was received by the Bank so that the timeliness of the Federal tax payment can be determined. However, if such a deposit is mailed to a Bank, it shall be subject to the "Timely Mailing treated as timely filing and paying" clause of section 7502 of the Internal Revenue Code (26 U.S.C. 7502).

(4) When a deposit of Federal taxes is not in accordance with the requirements governing form of payment set forth in paragraph (a) of this section, a Bank shall place in the space provided on the face of each Federal tax deposit form a stamp impression reflecting the name of the Bank and the date on which the proceeds of the accompanying payment instrument are collected by the Bank. This date shall be used for the purpose of determining the timeliness of the Federal tax payment.

§ 203.6 Parties to the contract.

A financial institution which is designated as a Treasury Tax and Loan depositary enters into a depositary contract with the Department of the Treasury. The parties to this contract are the Treasury, acting through the Federal Reserve Banks as fiscal agents of the United States, and each financial institution designated under § 203.3. The terms of the contract include all of the provisions of this part.

§ 203.7 Obligations of the depositary.

A depositary shall:

(a) Administer a Treasury tax and loan account in accordance with this part and any amendments or supplements thereto, and instructions issued pursuant thereto, including the Procedural Instructions for Treasury Tax and Loan Depositaries.

(b) Comply with the requirements of section 202 of Executive Order 11246, entitled "Equal Employment Opportunity" (3 CFR, 1964–1965 Comp.

p. 339), as amended by Executive Order 12086 (3 CFR, 1978 Comp. p.230), and the regulations issued thereunder at 41 CFR chapter 60, as amended. The Secretary of the Treasury may terminate the contract with a depositary for failure to comply with the terms of the contract set forth in this section relating to equal employment opportunity.

(c) Comply with the requirements of section 503 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 793, and the regulations issued thereunder at 41 CFR parts 60–741, requiring Government contractors to take affirmative action to employ qualified handicapped individuals, and

(d) Comply with the requirements of section 503 of the Vietnam Era Veterans' Readjustment Assistance Act of 1972, as amended, 38 U.S.C. 4212, Executive Order 11701, and the regulations issued thereunder at 41 CFR parts 60–250, for the promotion of employment of disabled and Vietnam era veterans.

Subpart B—Options

§ 203.8 General requirement.

A Treasury tax and loan depositary shall administer its Treasury tax and loan account under either the Note Option or the Remittance Option.

§ 203.9 Note Option.

(a) *Classes.* Depositaries electing this option will be subdivided into Note Option Class A, B, or C depending upon the volume of deposits credited to their tax and loan accounts during the previous calendar year, as specified in the Procedural Instructions for Treasury Tax and Loan Depositaries.

(b) *Additions.* The Treasury will invest funds in obligations of depositaries selecting the Note Option. Such obligations shall be in the form of open-ended notes and additions and reductions will be reflected on the books of the Federal Reserve Bank of the district. A depositary electing the Note Option shall debit, as of the first business day after crediting deposits to its tax and loan account, its tax and loan account in the amount of such deposits and simultaneously credit the note thereby reflecting an increase in like amount in Treasury's investment in obligations of the depositary.

(c) *Delivery.* A depositary administering its tax and loan account under the Note Option shall forward at the close of business each day its advices of credit for that day to the Federal Reserve Bank of the district via the most expeditious means reasonably available. This may include the U.S. Postal Service, in instances where the depositary does not use a faster method for other documents (e.g., checks) being remitted to the Federal Reserve Bank or Branch city.

(d) *Other Additions.* Other funds from the Treasury's operating cash may be offered from time to time to certain Note Option depositaries. Each such Note Option depositary shall have the opportunity to decide whether to receive from the Treasury such additional investments in its notes.

(e) *Withdrawals.* The amount of the note shall be payable on demand without previous notice. Calls for payment on the note will be by direction of the Secretary of the Treasury through the Federal Reserve Banks. A depositary shall arrange for the payment of calls on the payment date specified in the calls by a charge to the reserve account of the depositary or the reserve account of a member bank correspondent.

(f) *Interest.* A note shall bear interest at the rate specified in § 203.12. Such interest is payable monthly by a charge to the reserve account of the depositary or through the reserve account of a member bank correspondent. Specific details about the computations of the amount of interest due, the means of payment, payment dates, Federal Reserve Bank responsibilities, and other related details are described in the Procedural Instructions for Treasury Tax and Loan Depositaries.

(g) *Maximum balance.* A depositary selecting the Note Option shall establish a maximum balance for its note account by providing notice to that effect in writing to the Federal Reserve Bank of the district. That portion of any advice of credit which, when posted at the Federal Reserve Bank, would cause the note balance to exceed the amount specified by the depositary will be withdrawn automatically by the Federal Reserve Bank. The maximum balance applies to that portion of the note account balance which is secured by collateral deposited in accordance with § 203.14(c)(1) with either Federal Reserve Banks or authorized third party custodians. Special direct investments, which are secured by collateral held by the depositary in accordance with § 203.14(c)(2) under off premises custody arrangements, shall not be considered in determining the amounts to be withdrawn automatically where a depositary's maximum balance is exceeded.

§ 203.10 Remittance Option

(a) *Remittance Option classes.* Depositaries electing this option will be subdivided into Remittance Option Class 1 or 2 depending upon the volume of deposits credited to their tax and loan accounts during the previous calendar year, as specified in the Procedural Instructions for Treasury Tax and Loan Depositaries.

(b) *Delivery.* A Remittance Option depositary shall establish and maintain procedures to ensure timely delivery of its advices of credit at the Federal Reserve Bank of the district prior to the Federal Reserve Bank's cutoff time for processing such credits the next business day after the date of credit.

(c) *Late fee.* If an advice of credit does not arrive at the Federal Reserve Bank before the designated cutoff hour for receipt of such advices, a late fee in the form of interest at the rate specified at § 203.12 will be assessed for each day's delay in receipt of such advice. Such late fee assessments will be effected on a monthly basis through a depositary's reserve account or the reserve account of a member bank correspondent. Specific details and procedures are included in the Procedural Instructions for Treasury Tax and Loan Depositaries.

(d) *Withdrawals.* For a depositary selecting the Remittance Option, funds equivalent to the amount of deposits credited by a depositary to its Treasury tax and loan account will be withdrawn by the Federal Reserve Bank upon receipt by the Federal Reserve Bank of the advices of credit supporting such deposits. A depositary shall arrange for the payment of withdrawals by an immediate charge to its reserve account or the reserve account of a member bank correspondent.

§ 203.11 Change of options.

A depositary is subject to the provisions of the option it has selected until such time as it provides notice to the Federal Reserve Bank requesting a change of option and receives formal notification from the Federal Reserve Bank of the effective date of the change of option. Specific details regarding changes of option are included in the Procedural Instructions for Treasury Tax and Loan Depositaries.

Subpart C—Interest and Compensation

§ 203.12 Rate of interest.

The rate of interest to be used in connection with the Note Option and the Remittance Option will be equal to the Federal funds rate less twenty-five basis points (i.e., ¼ of 1 percent). Details about the computation are included in the Procedural Instructions for Treasury Tax and Loan Depositaries.

§ 203.13 Compensation for services.

Except as provided in the Procedural Instructions for Treasury Tax and Loan Depositaries, depositaries will not be

compensated for servicing the tax and loan account or for the bookkeeping costs of maintaining that account.

Subpart D—Collateral Security

§ 203.14 Collateral security requirements.

(a) *Note Option.*

(1) Before crediting deposits to its Treasury tax and loan account, a Note Option depositary shall pledge collateral security in accordance with the requirements of paragraphs (c)(1), (d) and (e) of this section in an amount that is sufficient to cover the sum of 100 percent of the pre-established maximum balance for the note account (see § 203.9(g) of this part), and the closing balance in its Treasury tax and loan account which exceeds recognized insurance coverage, minus the amount of the note balance attributable to special direct investments.

(2) Before special direct investments are credited to a depositary's note account, a Note Option depositary shall pledge collateral security in accordance with the requirements of paragraphs (c)(2) and (e) of this section, and in accordance with the instructions provided in the Procedural Instructions for Treasury Tax and Loan Depositaries, to cover 100 percent of the amount of the special direct investments to be received.

(b) *Remittance Option.* Prior to crediting deposits to its Treasury tax and loan account, a Remittance Option depositary shall pledge collateral security in accordance with the requirements of paragraph (c)(1), (d), and (e) of this section in an amount which is sufficient to cover the maximum balance in the tax and loan account at the close of business each day, less recognized insurance coverage.

(c) *Deposits of securities.*

(1) Collateral security required under paragraphs (a)(1) and (b) of this section shall be deposited with the Federal Reserve Bank of the district, or with a custodian or custodians within the United States designated by the Federal Reserve Bank, under terms and conditions prescribed by the Federal Reserve Bank.

(2)(i) Collateral security required under paragraph (a)(2) of this section shall be pledged under a written security agreement on a form provided by the Federal Reserve Bank of the district. The collateral security pledged to satisfy the requirements of paragraph (a)(2) of this section may remain in the pledging depositary's possession and the fact that it has been pledged shall be evidenced by advices of custody to be incorporated by reference in the written security agreement. The written security agreement and all advices of custody covering collateral security pledged under that agreement shall be provided by the depositary to the Federal Reserve Bank of the district. Collateral security pledged under the agreement shall not be substituted for or released without the advance written approval of the Federal Reserve Bank of the district, and any collateral security subject to the security agreement shall remain so subject until an approved substitution is made. No substitution or release shall be approved until an advice of custody containing the description required by the written security agreement is received by the Federal Reserve Bank of the district.

(ii) Treasury's security interest in collateral security pledged by a depository in accordance with paragraph (c)(2)(i) of this section to secure special direct investments is perfected without the Treasury's taking possession of the collateral security for a period of not to exceed 21 days from the day of receipt of the special direct investment.

(d) *Acceptable securities.* Unless otherwise specified by the Secretary of the Treasury, collateral security pledged under this section may be transferable securities of any of the classes listed below. Collateral will be accepted at values assigned by the Federal Reserve Bank of the district.

(1) Obligations issued or fully insured or guaranteed by the United States or any U.S. Government agency, and obligations of Government-sponsored corporations which under specific statute may be accepted as security for public funds.

(2) Obligations issued or fully guaranteed by the International Bank for Reconstruction and Development, the Inter-American Development Bank or the Asian Development Bank.

(3) Obligations partially insured or guaranteed by any U.S. Government agency.

(4) Notes representing loans to students in colleges or vocational schools which are insured either by Federal insurance or by a State agency or private nonprofit institution or organization administering a student loan insurance program in accordance with a formal agreement with the Commissioner of Education under the provisions of the Higher Education Act of 1965, as amended, 20 U.S.C. 1001, or the National Vocational Student Loan Insurance Act of 1965, as amended, 20 U.S.C. 981.

(5) Obligations issued by States of the United States.

(6) Obligations of Puerto Rico.

(7) Obligations of counties, cities, and other governmental authorities and instrumentalities which are not in default as to payments on principal or interest.

(8) Obligations of domestic corporations which may be purchased by banks as investment securities under the limitations established by Federal bank regulatory agencies.

(9) Commercial and agricultural paper and bankers' acceptances approved by the Federal Reserve Bank of the district.

(10) Zero-coupon obligations of the U.S. Treasury and the Resolution Funding Corporation.

(e) *Assignment of securities.* A tax and loan depositary that pledges securities which are not negotiable without its endorsement or assignment may furnish, in lieu of placing its unqualified endorsement on each security, an appropriate resolution and irrevocable power of attorney authorizing the Federal Reserve Bank to assign the securities. The resolution and power of attorney shall conform to such terms and conditions as the Federal Reserve Bank shall prescribe.

(f) *Effecting payments of principal and interest on securities pledged as collateral subsequent to the insolvency of a depositary.*

(1) *General.* In the event of the depositary's insolvency or closure, or in the event of the appointment of a receiver, conservator, liquidator or other similar officer to terminate its business, the depositary agrees that all principal and interest payments on any security pledged to protect the note account (if applicable) and the Treasury tax and loan account, due as of the date of the insolvency or closure, or thereafter becoming due, shall be held separate and apart from any other assets and shall constitute a part of the pledged security available to satisfy any claim of the United States.

(2) *Payment procedures.*

(i) Subject to the waiver in paragraph (f)(2)(iii) of this section, each depositary (including, with respect to such depositary, an assignee for the benefit of creditors, a trustee in bankruptcy, or a receiver in equity) shall immediately remit each payment of principal and/or interest received by it with respect to collateral pledged pursuant to this section to the Federal Reserve Bank of the district, as fiscal agent of the United States, and in any event shall so remit no later than 10 days after receipt of such a payment.

(ii) Subject to the waiver in paragraph (f)(2)(iii) of this section, each obligor on a security pledged by a depositary pursuant to this section shall make each payment of principal and/or interest

due with respect to such security directly to the Federal Reserve Bank of the district, as fiscal agent of the United States.

(iii) The requirements of paragraphs (f)(2) (i) and (ii) of this section are hereby waived for only so long as a pledging depositary remains solvent. The foregoing waiver is terminated without further action immediately upon insolvency of a pledging depositary or, if earlier, upon notice by the Treasury or the Federal Reserve Bank of the district of such termination. For purposes of this paragraph, a depositary is insolvent when, voluntarily or by action of competent authority, it is closed because of present or prospective inability to meet the demands of its depositors or shareholders.

Subpart E—Miscellaneous Provisions

§ 203.15 Termination of contract.

(a) *Termination by the Treasury.* The Secretary of the Treasury may terminate the contract of a depositary at any time upon notice to that effect to that depositary effective on the date set forth in the notice.

(b) *Termination by the depositary.* A depositary may terminate its depositary contract by submitting notice to that effect in writing to the Federal Reserve Bank of the district effective at a prospective date set forth in the notice.

§ 203.16 Implementing instructions.

A Federal Reserve Bank is authorized to issue instructions consistent with these regulations for carrying out the requirements of this part that shall be binding upon depositaries located in its district.

§ 203.17 Effective date.

This revision of this part is proposed to be effective on August 2, 1993.

Russell D. Morris,

Commissioner.

[FR Doc. 93–14802 Filed 6–30–93; 8:45 am]

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DEPARTMENT OF DEFENSE

Office of the Secretary

32 CFR Part 199

RIN 0720–AA17

[DoD 6010.8–R]

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS); Partial Hospitalization

AGENCY: Office of the Secretary, DoD.

ACTION: Final rule.

SUMMARY: This final rule establishes a CHAMPUS benefit for partial hospitalization and makes corrections and clarifications on other mental health issues resulting from implementation of recent legislative changes. The partial hospitalization benefit is being added at the request of Congress to improve the availability of mental health services under CHAMPUS. The intent is to provide a needed service at a lower cost than the full hospitalization rate, and allow more efficient use of resources for needed mental health care. Facilities must be certified and enter into a participation agreement with CHAMPUS and obtain the required preauthorization prior to admitting CHAMPUS patients. Applications for facility approval may be obtained from the Director, OCHAMPUS, or a designee.

EFFECTIVE DATE: September 29, 1993.

ADDRESSES: Office of the Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS), Program Development Branch, Aurora, CO 80045–6900.

FOR FURTHER INFORMATION CONTACT: Rose M. Sabo, M.P.A., B.S., Health Care Policy Analyst, Program Development Branch, OCHAMPUS, telephone (303) 361–1178.

SUPPLEMENTARY INFORMATION: On July 8, 1991, CHAMPUS published a proposed rule regarding a number of mental health program changes, including establishment of a partial hospitalization benefit (**Federal Register** Vol. 56, No. 130). A partial hospitalization benefit has been the subject of study by OCHAMPUS for a number of years. The Department of Defense is committed to providing CHAMPUS beneficiaries with the most clinically appropriate and cost-effective mental health services available. We believe that partial hospitalization is a clinically appropriate treatment modality that will be an important enhancement to the available continuum of care in the CHAMPUS mental health program. We also believe that utilization management protocols now in place can effectively ensure the cost-effectiveness of this new benefit.

Included with this final rule are some modifications to the mental health policy resulting from publication of prior amendments and several technical revisions. They are as follows:

- Making a conforming amendment to increase the time allotted for development of a master treatment plan for acute care admissions from 72 hours to 5 days, as agreed upon in the final rule on mental health care published October 18, 1991 (**Federal Register** Vol. 56, No. 202). The number of days was changed in the final rule as a result of public comment, but the change was not reflected in a subsequent issuance on medical documentation published November 26, 1991 (**Federal Register** Vol. 56. No. 228). This rule revises the medical documentation provision § 199.7(b)(3)(iv)(B)(5), to conform to the current Program benefits provision (§ 199.4(b)(6)(iii)).
- Adding a series of technical revisions to § 199.6(b)(4)(x) to change the terminology referring to certain limited scope institutional providers as "specialized treatment facilities." The revision adopts the new term "special institutional providers" for these facilities in order to avoid confusion with a new DoD program called the Specialized Treatment Services Program, which involves the designation of certain military or civilian hospitals for concentration on organ transplants and certain other highly specialized medical or surgical procedures.

Following is a discussion of the comments we received regarding partial hospitalization, and the action we are taking in response.

1. Hospital-Based Programs Versus Freestanding

Proposed rule. The proposed rule established partial hospitalization programs as Specialized Treatment Facilities. It also limited partial hospitalization programs to those which are hospital-based. The following comments were received on this issue:

Comment 1A. One professional association provided information concerning section 4162, Omnibus Budget Reconciliation Act of 1990 (Pub. L. 101–508), November 5, 1990, amending the Social Security Act to establish partial hospitalization in community mental health centers as a Medicare benefit and provider category effective October 1, 1991. Prior to passage of the law, partial hospitalization services were covered only if the program was hospital-based or hospital affiliated.

Comment 1B. One nationally recognized association strongly objected to the exclusion of the appropriately accredited free-standing partial hospitalization program in this benefit. The commenter felt such an approach would impede development of new facilities by restricting the benefit to hospital-owned programs and be anti-competitive. The commenter indicated that no data is available which would indicate that quality of care or treatment effectiveness is less in the freestanding facility than in the hospital-based

program. Free-standing facilities are accredited under the Consolidated Standards Manual by JCAHO (now referred to as the Mental Health Manual); because the accreditation process surveys the freestanding facility as a single service unit, the survey is typically more detailed and intensive than the accreditation of a partial hospital component of a hospital system, which is surveyed as only one component among many in the hospital system.

Comment 1C. A national professional association supported expanding the benefit to include freestanding community mental health programs.

Comment 1D. A professional who has worked in day programs commented that limiting coverage to hospital-based programs limits access to the treatment which has proven cost-effective. She relayed that there are many freestanding providers who offer comparable services.

Comment 1E. One organization that operates several day care programs protested the exclusion of free-standing independent providers from reimbursement. The commenter objected stating that to exclude from CHAMPUS reimbursement all programs which are not hospital-based deprives patients from access to some of the most cost-effective, quality programs in the field. The commenter stated that determination of reimbursement eligibility should depend upon compliance with CHAMPUS criteria, in addition to state licensing and accreditation.

Comment 1F. One commenter wrote objecting to the fact that the proposal limited coverage to hospital-based partial programs. He indicated this would ensure that partial day programs would be used only as a last resort after more costly inpatient facilities and benefits have been exhausted. The commenter felt that inpatient providers have an obvious conflict of interest that is clearly to the detriment of partial day programs. The commenter indicated he appreciated the many quality concerns, but felt they could be easily addressed through regulations and accreditation guidelines.

Comment 1G. One partial hospital day program wrote objecting to the exclusion of free-standing providers from reimbursement, stating that JCAHO accreditation process takes 3 days to complete in a freestanding facility (Mental Health Manual standards) versus a walk through of partial facilities which are attached to a hospital (general hospital standards). The commenter pointed out that CHAMPUS currently provides coverage for alcohol rehabilitation in a freestanding, independent setting. The commenter requested that all programs meet demanding standards in terms of state licensure and accreditation to ensure efficient and cost-effective delivery of high quality day treatment.

Comment 1H. A residential treatment center (RTC) commented that RTC based partial programs can be utilized both as an alternative to residential treatment and as a means of shortening lengths of stays in RTCs. The commenter opined that keeping children in their homes with their families and out of hospitals is worthy of inclusion in the partial benefit and would result in savings from the reduced daily rate.

Comment 1I. Several comments recommended CHAMPUS recognize freestanding facilities as a primary method of hospital treatment, rather than a "step-down," to have success in cost containment efforts.

Comment 1J. One commenter stated by restricting coverage to only those programs that are hospital-based, well qualified programs that are possibly even more cost-effective are being excluded.

Comment 1K. Two commenters supporting free-standing programs recommended quality be controlled by state certification and JCAHO standards.

Comment 1L. One commenter said that freestanding partial programs provided a unique perspective on the provision of services as an alternative to inpatient treatment rather than a transitional modality. Hospital-based programs, by design, may be structured without such intensity so as not to compete with their more lucrative inpatient programs. The commenter urged CHAMPUS to include freestanding programs for coverage and use regulatory requirements such as licensure and accreditation to monitor quality.

Response: Based on the above comments, CHAMPUS is allowing freestanding facilities to become authorized as CHAMPUS providers of partial hospitalization services and requiring that all partial hospitalization programs, whether freestanding or hospital-based, be accredited under the JCAHO Mental Health Manual (formerly Consolidated Standards). Rather than exclude hospital-based or freestanding providers from the CHAMPUS partial hospitalization program, we feel the quality of each program seeking CHAMPUS authorization should be evaluated on the quality of its program and not its organizational form. Extending provider eligibility will help promote beneficiary accessibility to partial hospitalization programs. Recognizing freestanding providers is consistent with the philosophy that partial hospitalization programs are a more appropriate treatment alternative to inpatient care for many patients, other than just as a step-down option following an inpatient stay.

2. Limit of 60 Days per Fiscal Year of Partial Hospitalization

Proposed rule. The proposed rule established a 60-day limit for partial hospitalization services, without waiver.

Comment 2A. One nationally recognized professional organization strongly recommended that partial hospitalization benefits should be linked to inpatient limits at a ratio of two days of partial hospitalization per one day of inpatient care. Use of partial hospitalization days would be applied against the inpatient yearly limits. The commenter stated this ratio has been used in both commercial benefit plans, as well as in a number of state-mandated benefits for partial hospitalization. This model for benefit design has the advantage of encouraging the flexible and clinically appropriate use of the continuum of care without offering incentives for overuse of hospitalization as might a benefit which supplies separate yearly limits for partial hospitalization and inpatient care. The commenter is concerned with the risk of encouraging overutilization through sequential use of benefits, such as the referral to partial hospitalization only after inpatient benefits had been exhausted or after utilization review has forced transfer to a less restrictive level of care. In essence, the commenter recommends that for the purpose of determining yearly limits for partial hospitalization that two days of partial hospitalization be provided for each one day of inpatient hospitalization. Partial hospitalization days would be applied against the yearly limits for hospitalization.

Comment 2B: Two professional groups asked that the partial hospitalization benefit be structured in a manner analogous to the available inpatient days designated, so that 60 days of partial hospitalization be available for adults (inpatient days legislatively limited to 30 days) and 90 days for children and adolescents (inpatient days legislatively limited to 45 days).

Comment 2C: One commenter said it is critical that, from the outset, the new benefit for partial hospitalization be viewed and used as an alternative to inpatient care. To achieve the goal of using partial programs to avoid or shorten psychiatric hospital stays, the partial program benefit cannot be

merely a transitional coverage from hospital care when the inpatient day limit is reached. The commenter recommended CHAMPUS use a trade-off between partial hospital coverage and existing mental health benefits at the rate of 2 to 1 (two partial days for one inpatient day). The commenter suggested the trade-off allow 90 days for adolescents and children.

Response: We agree with the commenters and are aware that partial hospitalization is frequently added as a "trade-off" benefit counted against the authorized limit for inpatient mental health care (e.g., a "2-for-1" approach). Although we favor a trade-off mechanism, we are precluded from structuring the benefit scheme in this manner because of the provisions of 10 U.S.C. 1079 (a)(6) and (i)(1). Instead, therefore, we will impose a limit of 60 days of care in a partial hospitalization program and use our utilization management program to control overutilization through preauthorization and concurrent review.

3. Maximum Rate of Reimbursement

Proposed Rule. The proposed rule suggested the reimbursement rate for full-day partial hospitalization be set at one-third of the average per diem rate that CHAMPUS pays for acute inpatient mental health care (low and high volume hospitals), adjusted for region of the country. A partial hospitalization program of less than six hours (but more than three hours) per treatment day would receive a per diem rate of 75 percent the rate for a full day program. The basis of reimbursement was proposed to be an all-inclusive per diem rate encompassing institutional, as well as professional services. The term all-inclusive encompasses the charges of therapists who are not employed by or contracted with the partial hospitalization program.

Comment 3A. One commenter recommended that partial hospitalization be reimbursed at a rate of forty percent of the rate of the 80th percentile of high volume hospital-specific rates and that professional services be reimbursed separately from the facility per diem. Otherwise, professionals would be given an economic incentive to continue hospitalization in order to be reimbursed on a fee-for-service basis.

Comment 3B. One professional organization commented that it was essential to have an all-inclusive reimbursement, encompassing charges for psychotherapy by therapists not employed by or contracted with the partial hospitalization program. Fee-for-service billings for some services like psychotherapy would drive up the costs of partial hospitalization and not lead to better care. The commenter stated that partial hospitalization programs were more like residential treatment center care than acute care, in that the patient is stable but needs continuing interdisciplinary care at a lower intensity than the acute or RTC setting. From that perspective the per diem rate, when set at an appropriate level, is a better alternative. The net effect of paying separately for professional services is likely to result in the gradual evolvement of partial hospitalization programs to provide only ancillary staff services for the per diem rate, while therapy will be provided by outside staff for separate reimbursement. The commenter suggested that the reimbursement be all-inclusive (including nonaffiliated therapists), with the per diem set at 50 percent of the prevailing. To reimburse separately for any services would increase the cost of partial programs, without improving the access or quality of covered care.

Comment 3C. Several commenters objected to the reimbursement rate of one-third the rate of inpatient care and suggested an all-inclusive reimbursement rate (including psychotherapy by nonaffiliated therapists) of at least 50 percent of the rate payable for full hospitalization services in the same locality.

Comment 3D. A residential treatment center (RTC) commented that savings from partial programs comes not only from the reduced daily rate, but also the reduced number of days per week. The RTC can do partial services for about 40% of its RTC rate when the difference in days per week is factored in. If the rate is all-inclusive (including nonaffiliated therapists) and set at one-third of the acute care daily rate, it would create a fiscal disincentive to partial programs.

Comment 3E. Several commenters endorsed the concept of separate billing for individual professional services to meet all of the program requirements of the CHAMPUS medical model.

Comment 3F. One commenter, in support of the all-inclusive rate encompassing psychotherapy and other program services, recommended the rate be set at 55% of the daily rate for RTC care.

Response: Many partial hospitalization settings bill on an all inclusive basis including psychotherapy performed by therapists not employed by or contracted with the partial hospitalization program; however, in response to some of the public comments, separate billing will be allowed for individual or family psychotherapy rendered by an attending, CHAMPUS-authorized mental health professional who is not an employee or contracted with the partial hospitalization program. Also, separate billing will be allowed for otherwise covered non-mental health medical services. No further unbundling will be permitted. In addition, we are raising the program rate to 40 percent of the blended per diem rate, instead of the proposed one-third. Some managed care organizations pay partial hospitalization program providers as much as 50 percent of what they pay inpatient psychiatric facilities; however, these organizations typically receive substantial discounts for inpatient services. This maximum reimbursement rate should be sufficient to induce partial hospitalization program providers to participate in CHAMPUS, while at the same time serve DOD's need to control health care cost inflation. The maximum reimbursement rate for full-day (minimum of 6 hours) partial hospitalization will be at 40 percent of the average per diem amount weighted by the number of days at each rate paid to both high and low volume psychiatric hospitals and units by Federal census region (as defined in § 199.14(a)(2)) during fiscal year 1990. For each region a blended allowed amount per day will be calculated using high volume and regional low volume data. The blended allowed amount per day will be weighted by the covered patient days. The average will be based upon CHAMPUS claims processed to completion during fiscal year 1990 and updated to the current year using the same factors as used under the CHAMPUS mental health per diem reimbursement system (as described in § 199.14(a)(2). A partial hospitalization program of less than 6 hours (with a minimum of three hours) will be paid a per diem rate of 75 percent of the rate for a full-day program.

Following is a table of maximum rates based on these calculations representing 40 percent of the FY93 blended per diem rate by census region.

TABLE OF FY 93 MAXIMUM RATES FOR PARTIAL HOSPITALIZATION PROGRAMS

United States Census Region	Rate (dollars)
Northeast:	
New England (ME, NH, VT, MA, RI, CT)	194
Mid-Atlantic (NY, NJ, PA)	211
Midwest:	
East North Central (OH, IN, IL, MI, WI)	188

TABLE OF FY 93 MAXIMUM RATES FOR PARTIAL HOSPITALIZATION PROGRAMS—Continued

United States Census Region	Rate (dollars)
West North Central (MN, IA, MO, ND, SD, NE, KS)	186
South:	
South Atlantic (DE, MD, DC, VA, WV, NC, SC, GA, FL)	201
East South Central (KY, TN, AL, MS)	218
West South Central (AR, LA, TX, OK)	215
West:	
Mountain (MT, ID, WY, CO, NM, AZ, UT, NV)	224
Pacific (WA, OR, CA, AK, HI)	220

4. Accreditation Standards

Proposed rule. The proposed rule requires that partial hospitalization programs be specifically accredited by and remain in compliance with standards issued by the Joint Commission on Accreditation of Healthcare Organizations and be licensed to provide partial hospitalization program services in the jurisdiction in which they operate. It also requires the program to comply with CHAMPUS Standards for Partial Hospitalization Programs and Facilities, as promulgated by the Director, OCHAMPUS.

Comment 4A. The proposed rule would require participating partial hospitalization programs to comply with standards promulgated by OCHAMPUS. The commenter hopes that OCHAMPUS will consult with members of the provider and practitioner community familiar with partial hospitalization programs in developing these standards. The commenter is requesting the standards be published for public review and comment.

Comment 4B. Several comments supported the partial hospitalization program standards of practice embraced by CHAMPUS and JCAHO as comprehensive and sufficient in addressing the boundaries of the service, the quality of the service and in defining appropriate access.

Comment 4C. Two organizations suggested that language be included in the regulation that CHAMPUS require JCAHO accreditation under the consolidated standards or "other accreditation approved by the Director, OCHAMPUS" in order to leave open the option, at CHAMPUS discretion, for an alternative to JCAHO accreditation.

Comment 4D. One commenter also pointed out that specific licensure for partial hospitalization is not available in all of the 50 states and recommended that the language of the regulation reflect that fact and require that licensure, where available, be obtained. The recommended accreditation by an external accrediting body, as well as by compliance with the internal CHAMPUS Standards for Partial Hospitalization represents an additional layer of scrutiny for quality of service in both hospital-based and freestanding programs. The commenter submits that this extensive accreditation process will screen out poor quality programs and furnish the degree of accountability and quality control necessary for the introduction of a new benefit. The restriction of the benefit to programs that have been in full operation for six months is generally reasonable but in special circumstances would inhibit the development of needed services. For example, a partial hospitalization program might be developed in conjunction with a military hospital, serving only CHAMPUS or DOD beneficiaries. Without an approved waiver to this requirement, such a program would by regulation be unable to obtain eligibility from CHAMPUS.

Comment 4E. One commenter recommended that fully operational for at least 6 months be defined to mean operating for 6 months with at least 25 percent capacity.

Response: The CHAMPUS-specific standards will encompass existing program requirements and guidelines. Additionally, we will require accreditation under JCAHO Mental Health Manual (formerly known as Consolidated Standards) as covered in the discussion on freestanding versus hospital-based programs. The language of the regulation is being revised, as suggested in public comment, to require that licensure, where available, be obtained. We will continue to require that the partial hospital program be fully operational and treating patients for at least six months with a minimum patient census of at least 30 percent capacity prior to submission of an application for certification. This requirement will help ensure that providers have a demonstrated record of service in the area of partial hospitalization before CHAMPUS authorization can be obtained. We do not feel the six-month period is unreasonable. It is considered more important to ensure that only fully qualified programs be approved, rather than consider waivers which might result in having to decertify those same facilities at a later date. Establishment of a partial hospitalization program at a military treatment facility (MTF) falls within the purview of the military services and under a program which is permitted to deviate from CHAMPUS requirements.

5. Cost-Sharing by Beneficiaries

Proposed rule. The proposed rule classified partial hospitalization as an inpatient level of care for the purposes of cost-sharing by beneficiaries.

Comment 5A. One national organization commented that partial hospitalization is most appropriately linked to inpatient benefits as cost-sharing is concerned, so the benefit plan does not introduce economic incentive or bias on the part of the beneficiary to choose a more expensive level of care (i.e., hospitalization) in order to reduce out of pocket responsibilities.

Response: Clearly, partial hospitalization is neither purely inpatient nor purely outpatient care. As operationally defined, the benefit lies somewhere between. Currently, several CHAMPUS demonstration projects which offer a partial hospitalization benefit (e.g., Contracted Provider Arrangement and some of the Catchment Area Management Demonstrations) cost-share services on an inpatient basis. Central to the concern over which cost-sharing approach is adopted is the higher cost-share associated with outpatient care for CHAMPUS beneficiaries. If partial hospitalization is cost-shared on an outpatient basis, out-of-pocket expenses could be substantially higher. Thus, a financial incentive would exist for beneficiaries to seek a higher level of care (i.e., acute or residential) than may be necessary. While utilization management procedures will help ensure certification of the appropriate level of care, the Department sees some added advantage in cost-sharing the benefit as inpatient care. Therefore, we will employ the authority granted to the Secretary to establish different cost-shares for mental health care (10 U.S.C. 1079 (i)(2)) and cost-share partial hospitalization services on an inpatient basis.

6. Waiver of the Partial Hospitalization Day Limit

In the proposed rule, no exceptions were proposed to the 60-day limit. Public comments were invited on whether a waiver should be allowed and, if so, the types of cases for which a waiver might be needed and the suggested criteria we might use to evaluate waiver requests.

Comment 6A. Several commenters stated that the 60-day benefit period is generally adequate for adult partial hospitalization, but that the proposed

limit was not adequate for the care of children and adolescents. With no waiver allowed, the more severely disturbed patients would ultimately move on to inpatient care. It seems more prudent to place the most stringent restrictions on length of stay on the most restrictive and expensive components of the continuum of care.

Comment 6B. One national association commented that partial hospitalization should be subject to the same waiver of the 60-day benefit limit as is available for acute care and residential treatment, as long as continued treatment is medically necessary. If a patient needs continued care but is unable to rely exclusively on outpatient therapy and is not eligible for inpatient care, continuation of partial hospitalization may be medically or psychologically necessary. Because the waiver is, by definition, an exceptions process, such decisions should be made only on a case-by-case basis. The association recommends that OCHAMPUS use the same waiver criteria as apply to acute inpatient psychiatric care.

Comment 6C. A program coordinator for partial hospitalization programs stated that the 60-day treatment limit should be adequate for most patients, but a waiver for additional time should be included. The coordinator reported experience that patients with certain diagnoses (e.g., borderline personality disorders) experience most lasting therapeutic gains with more time in a partial program. The partial program can decrease the use or shorten the stay for inpatient treatment for these patients who often become self-destructive.

Comment 6D. An RTC commented that the 60-day limit was not a refinement, but a blunt instrument and that decisions on length of care should be made clinically, not temporally.

Comment 6E. Several commenters recommended maintaining some flexibility in determining if the length of stay in treatment is sufficient. Even though it was acknowledged that a sixty day limit may be appropriate for many patients, there will be a need for exceptions in individual cases.

Response: As a result of public comment, the 60-day limit will be accompanied by a waiver. The availability of a waiver is consistent with the overall CHAMPUS health care benefit policy for other levels of care. Although the expectation is that the 60-day limit will be adequate to meet the needs of most patients enrolled in partial hospitalization programs, a waiver will be considered for cases in which a patient exhibits well-documented new symptoms or maladaptive behavior which have appeared in the partial hospitalization setting requiring additional days to complete necessary elements of the treatment plan prior to discharge.

7. Requirement for Preauthorization and Concurrent Review

Proposed rule. The proposed rule required preauthorization and concurrent review for all admissions to a partial hospitalization program. The proposed rule stipulated that no emergency admissions would be recognized.

Comment 7A. Two commenters recommended there should be exceptions when an admission to a partial hospital program would meet emergency criteria. The commenter stated that such instances could mean the difference between placing a patient in an inpatient hospital program or a less intensive partial program.

Response. The CHAMPUS definition of a psychiatric emergency is quoted in part: "the patient is at immediate risk of serious harm to self or others as a result of a mental disorder and requires immediate continuous skilled observation at the acute level of care." Such observation would not be available in a partial hospitalization setting. Crisis stabilization is an appropriate role for partial hospitalization programs, and this role is included in the range of benefits available.

8. Benefit Design

Proposed rule. Psychiatric partial hospitalization services will be considered necessary when: (1) The patient is unable to remain in the community at a sufficient level of functioning to permit an adequate course of therapy on an outpatient basis; (2) the patient is in need of crisis stabilization; or (3) the patient needs treatment of an acute mental health disorder or services as a transition from an inpatient hospital program. An interdisciplinary program is required which addresses assessment of the patient, social services evaluation, educational history and assessment, etc.

Comment 8A. One comment was received objecting to the requirement for the social services component as a part of the partial hospitalization program and objecting to paying for living arrangements for the patient.

Response. CHAMPUS will approve only the acute clinical model of partial hospitalization that is multi-disciplinary in nature. The program is expected to either provide or make arrangements for the provision of educational services, as well as community based support services. The hours devoted to education will not count, however, toward the therapeutic half or full day program. The physical, social, cultural, recreational, health maintenance and rehabilitation needs of the patients must be addressed.

Comment 8B. The commenter agreed with providing transportation to a hospital if hospitalization was required; however, the commenter did not feel the transportation needed to be in an ambulance, unless separate reimbursement was allowed.

Response. A partial program is expected to have a standard operating procedure for handling emergency services. Ambulance services for a bona fide emergency will be cost-shared separately.

Comment 8C. One national organization suggested that the criteria for admission to a partial hospitalization program allow transition from an inpatient hospital program, outpatient program or residential treatment center.

Response. The partial hospitalization benefit is generally viewed and designed as a trade-off to acute inpatient hospital care, but is considered a separate and distinct level of mental health care. Transition from another level of care is neither required nor prohibited.

Comment 8D. One commenter objected to occupational therapy services falling within an ancillary therapy category and requested they be covered as a core service in partial hospitalization.

Response. We appreciate the important role occupational therapy plays in mental health settings; however, separating our services which are considered an integral part of the partial hospitalization program is inappropriate. In essence, in covering partial hospitalization programs, CHAMPUS is purchasing a package of services. CHAMPUS has found it more economically and programmatically feasible to purchase a package of services, as compared to cost-sharing such services on a fragmented basis.

Comment 8E. One commenter suggested that a comprehensive functional assessment which addresses all aspects of human performance such as cognitive, biological and psychosocial components be incorporated.

Response. We agree and have added this requirement to the assessments.

Comment 8F. One organization suggested that all services be provided under the general direction of a psychiatrist to ensure medication and physical needs of all patients are taken into account since the program is

designed as an acute medical model of a partial hospitalization program.

Response. We agree and have made the recommended change, vesting medication and physical needs of the patient under the general oversight of a licensed psychiatrist employed by the partial hospitalization center. The primary therapist actually rendering the mental health services may be any one of the CHAMPUS qualified mental health providers operating within the scope of his or her license.

Comment 8G. One organization suggested there be 7 calendar days for either full-day or half-day programs to devise a master treatment plan.

Response. The limits were recently established through publication of a separate amendment on medical documentation (November 26, 1991 Vol. 567, No. 228) based on time frames that had been found appropriate. Grace Period for Accreditation under JCAHO Mental Health Manual (formerly consolidated Standards).

The partial hospitalization program shall be required to meet several certification requirements: (1) Be specifically accredited by and remain in substantial compliance with standards issued by the Joint Commission on Accreditation of Healthcare Organizations under the Mental Health Manual (formerly the Consolidated Standards Manual); (2) be licensed as a partial hospitalization program to provide PHP services in the jurisdiction in which they operate; (3) be fully operational for a period of at least six months (with 30 percent capacity) before an application for CHAMPUS authorization can be submitted; (4) enter into a participation agreement with the Director, OCHAMPUS; and (5) have a written transfer agreement with at least one CHAMPUS-approved hospital for emergency situations. Providers who are already certified under the JCAHO hospital standards can be certified and phased into the program if they are not covered initially under the JCAHO Mental Health Manual (formerly known as Consolidated Standards), but meet all other CHAMPUS requirements. CHAMPUS is granting a one-time grace period not to exceed April 1, 1994, only for the consolidated standard requirement if the provider is already accredited under the JCAHO hospital standards. The provider must agree not to accept any new admissions for CHAMPUS patients for care beyond April 1, 1994, if accreditation and substantial compliance under the JCAHO Mental Health Manual have not been obtained by that date.

Rulemaking Procedures

Executive Order 12291 requires that a regulatory impact analysis be performed on any major rule. A "major rule" is defined as one which would result in an annual effect on the national economy of $100 million or more or have other substantial impacts.

Section 605(b) of the Regulatory Flexibility Act (RFA) requires that each federal agency prepare, and make available for public comment, a regulatory flexibility analysis when the agency issues a regulation which would have a significant impact on a substantial number of small entities. For purposes of the RFA, we consider small entities to include all hospitals and third-party payers.

This final rule is not a major rule under Executive Order 12291. Also, we certify that this rule will not significantly affect a substantial number of small entities within the meaning of the Regulatory Flexibility Act. For the most part, this final rule would broaden the range of benefits available under CHAMPUS by adding coverage for a new provider category, enhancing the available continuum of care in the CHAMPUS mental health program. Beneficiaries and providers would be afforded an option to institutionalization. Preauthorization, continued stay reviews and other existing utilization management criteria will be extended for care under the partial hospitalization program.

This rule does impose minimal information collection requirements in the form of a provider application form for those partial hospitalization programs that choose to apply. Therefore, it does need to be reviewed by the Executive Office of Management and Budget under authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501–3511). This process is currently underway.

List of Subjects in 32 CFR Part 199

Claims, Handicapped, Health insurance, Military personnel.

Accordingly, 32 CFR part 199 is amended as follows:

PART 199—[AMENDED]

1. The authority citation for part 199 continues to read as follows:

Authority: 5 U.S.C. 301, 10 U.S.C. 1079, 1086.

2. Section 199.2(b) is amended by removing the definition for "Day or night care;" by revising the term "Other specialized treatment facilities" to read "other special institutional providers," and placing it in appropriate alphabetical order and by adding definition "Partial hospitalization" and placing it in alphabetical order, as follows:

§ 199.2 Definitions.

* * * * *

(b) * * *

Partial hospitalization. A treatment setting capable of providing an interdisciplinary program of medical therapeutic services at least 3 hours per day, 5 days per week, which may embrace day, evening, night and weekend treatment programs which employ an integrated, comprehensive and complementary schedule of recognized treatment approaches. Partial hospitalization is a time-limited, ambulatory, active treatment program that offers therapeutically intensive, coordinated, and structured clinical services within a stable therapeutic environment. Partial hospitalization is an appropriate setting for crisis stabilization, treatment of partially stabilized mental health disorders, and a transition from an inpatient program when medically necessary. Such programs must enter into a participation agreement with CHAMPUS, and be accredited and in substantial compliance with the standards of the Mental Health Manual of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (formerly known as the Consolidated Standards).

* * * * *

3. Section 199.4 is amended by revising the heading of paragraph (a)(12); in paragraph (a)(12)(i) by revising the words "outpatient care" to read "partial hospitalization;" by adding a new first sentence to paragraph (a)(12)(ii)(A); in paragraph (b)(6) introductory text by revising the words "specialized treatment facility" to read "special institutional provider;" by adding new paragraphs (b)(10), (f)(2)(v) and (f)(3)(iv) to read as follows:

§ 199.4 Basic program benefits.

(a) *General.*

(12) *Utilization review, quality assurance and reauthorization for inpatient mental health services and partial hospitalization.*

* * * * *

(ii) *Preadmission authorization.*

(A) This section generally requires peradmission authorization for all nonemergency inpatient mental health services and prompt continued stay authorization after emergency admissions. It also requires preadmission authorization for all admissions to a partial hospitalization program, without exception, as the

concept of an emergency admission does not pertain to a partial hospitalization level of care. * * *

* * * * *

(b) *Institutional Benefits.*

* * * * *

(10) *Psychiatric partial hospitalization services.*

(i) *In general.* Partial hospitalization services are those services furnished by a CHAMPUS-authorized partial hospitalization program and authorized mental health providers for the active treatment of a mental disorder. All services must follow a medical model and vest patient care under the general direction of a licensed psychiatrist employed by the partial hospitalization center to ensure medication and physical needs of all the patients are considered. The primary or attending provider must be a CHAMPUS authorized mental health provider, operating within the scope of his/her license. These categories include physicians, clinical psychologists, certified psychiatric nurse specialists, clinical social workers, marriage and family counselors, pastoral counselors and mental health counselors. Partial hospitalization services are covered as a basic program benefit only if they are provided in accordance with paragraph (b)(10) of this section.

(ii) *Criteria for determining medical or psychological necessity of psychiatric partial hospitalization services.* Psychiatric partial hospitalization services will be considered necessary only if all of the following conditions are present:

(A) The patient is suffering significant impairment from a mental disorder (as defined in § 199.2) which interferes with age appropriate functioning.

(B) The patient is unable to maintain himself or herself in the community, with appropriate support, at a sufficient level of functioning to permit an adequate course of therapy exclusively on an outpatient basis (but is able, with appropriate support, to maintain a basic level of functioning to permit partial hospitalization services and presents no substantial imminent risk of harm to self or others).

(C) The patient is in need of crisis stabilization, treatment of partially stabilized mental health disorders, or services as a transition from an inpatient program.

(D) The admission into the partial hospitalization program is based on the development of an individualized diagnosis and treatment plan expected to be effective for that patient and permit treatment at a less intensive level.

(iii) *Preauthorization and concurrent review requirements.* All preadmission authorization and concurrent review requirements and procedures applicable to acute mental health inpatient hospital care in paragraphs (a)(12) and (b) of this section are applicable to the partial hospitalization program, except that the criteria for considering medical or psychological necessity shall be those set forth in paragraph (b)(10)(ii) of this section, and no emergency admissions will be recognized.

(iv) *Institutional benefits limited to 60 days.* Benefits for institutional services for partial hospitalization are limited to 60 treatment days (whether a full day or partial day program) in a fiscal year or in an admission. This limit may be extended by waiver.

(v) *Waiver of the 60-day partial hospitalization program limit.* The Director, OCHAMPUS (or designee) may, in special cases, waive the 60-day partial hospitalization benefit and authorize payment for care beyond the 60-day limit.

(A) the criteria for waiver are set forth in paragraph (b)(10)(ii) of this section. In applying these criteria in the context of waiver request review, special emphasis is placed on determining whether additional days of partial hospitalization are medically/psychologically necessary to complete essential elements of the treatment plan prior to discharge. Consideration is also given in cases in which a patient exhibits well-documented new symptoms or maladaptive behaviors which have appeared in the partial hospitalization setting requiring significant revisions to the treatment plan.

(B) The clinician responsible for the patient's care is responsible for documenting the need for additional days and must establish an estimated length of stay beyond the date of the 60-day limit. There must be evidence of a coherent and specific plan for assessment, intervention and reassessment that reasonably can be accomplished within the time frame of the additional days of coverage requested under the waiver provisions.

(C) For patients in care at the time the partial hospitalization program limit is reached, a waiver must be requested prior to the limit. For patients being preadmitted after having received 60 days in the fiscal year, the waiver review will be conducted at the time of the preadmission authorization.

(vi) *Services and supplies.* The following services and supplies are included in the per diem rate approved for an authorized partial hospitalization program:

(A) *Board.* Includes use of the partial hospital facilities such as food service, supervised therapeutically constructed recreational and social activities, and other general services as considered appropriate by the Director, OCHAMPUS, or a designee.

(B) *Patient assessment.* Includes the assessment of each individual accepted by the facility, and must, at a minimum, consist of a physical examination; psychiatric examination; psychological assessment; assessment of physiological, biological and cognitive processes; developmental assessment; family history and assessment; social history and assessment; educational or vocational history and assessment; environmental assessment; and recreational/activities assessment. Assessments conducted within 30 days prior to admission to a partial program may be used if approved and deemed adequate to permit treatment planning by the partial hospital program.

(C) *Psychological testing.*

(D) *Treatment services.* All services, supplies, equipment and space necessary to fulfill the requirements of each patient's individualized diagnosis and treatment plan (with the exception of the five psychotherapy sessions per week which may be allowed separately for individual or family psychotherapy based upon the provisions of paragraph (b)(10)(vii) of this section). All mental health services must be provided by a CHAMPUS authorized individual professional provider of mental health services. [Exception: PHPs that employ individuals with master's or doctoral level degrees in a mental health discipline who do not meet the licensure, certification and experience requirements for a qualified mental health provider but are actively working toward licensure or certification, may provide services within the all-inclusive per diem rate but the individual must work under the clinical supervision of a fully qualified mental health provider employed by the PHP.]

(vii) *Social services required.* The facility must provide an active social services component which assures the patient appropriate living arrangements after treatment hours, transportation to and from the facility, arrangement of community based support services, referral of suspected child abuse to the appropriate state agencies, and effective after care arrangements, at a minimum.

(viii) *Educational services required.* Programs treating children and adolescents must ensure the provision of a state certified educational component which assures that patients do not fall behind in educational placement while receiving partial

hospital treatment. CHAMPUS will not fund the cost of educational services separately from the per diem rate. The hours devoted to education do not count toward the therapeutic half or full day program.

(ix) *Family therapy required.* The facility must ensure the provision of an active family therapy treatment component which assures that each patient and family participate at least weekly in family therapy provided by the institution and rendered by a CHAMPUS authorized individual professional provider of mental health services. There is no acceptable substitute for family therapy. An exception to this requirement may be granted on a case-by-case basis by the Director, OCHAMPUS, or designee, only if family therapy is clinically contraindicated.

(x) *Professional mental health benefits limited.* Professional mental health benefits are limited to a maximum of one session (60 minutes individual, 90 minutes family) per authorized treatment day not to exceed five sessions in any calendar week. These may be billed separately from the partial hospitalization per diem rate only when rendered by an attending, CHAMPUS-authorized mental health professional who is not an employee of, or under contract with, the partial hospitalization program for purposes of providing clinical patient care.

(xi) *Non-mental health related medical services.* Separate billing will be allowed for otherwise covered, non-mental health related medical services.

* * * * *

(f) * * *

(2) * * *

(v) *Psychiatric partial hospitalization services.* Institutional and professional services provided under the psychiatric partial hospitalization program authorized by paragraph (b)(10) of this section shall be cost shared as inpatient services.

(3) * * *

(iv) *Psychiatric partial hospitalization services.* Institutional and professional services provided under the psychiatric partial hospitalization program authorized by paragraph (b)(10) of this section shall be cost shared as inpatient services.

* * * * *

4. Section 199.6 is amended by revising the heading of paragraph (b)(4)(x), paragraph (b)(4)(x)(A)(*1*) introductory text, paragraph (b)(4)(x)(A)(*2*) introductory text, paragraphs (b)(4)(x)(A)(*2*)(*i*) and (*ii*), paragraph (b)(4)(x)(A)(*2*)(*vi*), paragraph (b)(4)(x)(A)(*3*) introductory text, (b)(4)(x)(B) introductory text, (b)(4)(x)(B)(*2*) and by adding new paragraph (b)(4)(xii), as follows:

§ 199.6 Authorized providers.

* * * * *

(b) * * *

(4) * * *

(x) *Other special institutional providers.*

(A) *General.*

(*1*) Care provided by certain special institutional providers (on either an inpatient or outpatient basis) may be cost-shared by CHAMPUS under specified circumstances and only if the provider is specifically identified in paragraph (b)(4)(x) of this section.

* * * * *

(*2*) To ensure that CHAMPUS beneficiaries are provided quality care at a reasonable cost when treated by a special institutional provider, the Director, OCHAMPUS may:

(*i*) Require prior approval of all admissions to special institutional providers.

(*ii*) Set appropriate standards for special institutional providers in addition to or in the absence of JCAHO accreditation.

* * * * *

(*vi*) Declare a special institutional provider not eligible for CHAMPUS payment if that facility has been found to have engaged in fraudulent or deceptive practices.

(*3*) In general, the following disclaimers apply to treatment by special institutional providers:

* * * * *

(B) *Types of providers.* The following is a list of facilities that have been designated specifically as special institutional providers.

* * * * *

(*2*) *PFTH facilities.* Special institutional providers also include facilities that seek approval to provide care authorized under the PFTH (see § 199.5).

* * * * *

(xii) *Psychiatric partial hospitalization programs.* Psychiatric partial hospitalization programs must be either a distinct part of an otherwise authorized institutional provider or a freestanding program. The treatment program must be under the general direction of a psychiatrist employed by the partial hospitalization program to ensure medication and physical needs of all the patients are considered. The primary or attending provider must be a CHAMPUS authorized mental health provider, operating within the scope of his/her license. These categories include physicians, clinical psychologists, certified psychiatric nurse specialists, clinical social workers, marriage and family counselors, pastoral counselors and mental health counselors. CHAMPUS reimbursement is limited to programs complying with all requirements of § 199.4(b)(10). In addition, in order for a partial hospitalization program (PHP) to be authorized, the PHP shall comply with the following requirements:

(A) The PHP shall comply with the CHAMPUS Standards for Partial Hospitalization Programs and Facilities, as promulgated by the Director, OCHAMPUS.

(B) The PHP shall be specifically accredited by and remain in substantial compliance with standards issued by the Joint Commission on Accreditation of Healthcare Organizations under the Mental Health Manual (formerly the Consolidated Standards).

Note: A one-time grace period is being allowed not to exceed April 1, 1994, for this provision only if the provider is already accredited under the JCAHO hospital standards. The provider must agree not to accept any new admissions for CHAMPUS patients for care beyond April 1, 1994, if accreditation and substantial compliance with the Mental Health Manual have not been obtained by that date.

(C) The PHP shall be licensed as a partial hospitalization program to provide PHP services within the applicable jurisdiction in which it operates.

(D) The PHP shall accept the CHAMPUS-allowable partial hospitalization program rate, as provided in § 199.14(a)(2)(ix) as payment in full for services provided.

(E) The PHP shall comply with all requirements of this section applicable to institutional providers generally concerning preauthorization, concurrent care review, claims processing, beneficiary liability, double coverage, utilization and quality review and other matters.

(F) The PHP must be fully operational and treating patients for a period of at least six months (with at least 30 percent minimum patient census) before an application for approval may be submitted. The PHP shall not be considered a CHAMPUS-authorized provider nor may any CHAMPUS benefits be paid to the facility for any services provided prior to the date the facility is approved by the Director, OCHAMPUS, or designee.

(G) All mental health services must be provided by a CHAMPUS-authorized mental health provider. [Exception: PHPs that employ individuals with master's or doctoral level degrees in a mental health discipline who do not

meet the licensure, certification and experience requirements for a qualified mental health provider but are actively working toward licensure or certification, may provide services within the all-inclusive per diem rate but the individual must work under the clinical supervision of a fully qualified mental health provider employed by the PHP.] All other program services shall be provided by trained, licensed staff.

(H) The PHP shall ensure the provision of an active family therapy treatment component which assures that each patient and family participate at least weekly in family therapy provided by the institution and rendered by a CHAMPUS authorized mental health provider.

(I) The PHP must have a written agreement with at least one backup CHAMPUS-authorized hospital which specifies that the hospital will accept any and all CHAMPUS beneficiaries transferred for emergency mental health or medical/surgical care. The PHP must have a written emergency transport agreement with at least one ambulance company which specifies the estimated transport time to each backup hospital.

(J) The PHP shall enter into a participation agreement with the Director, OCHAMPUS, which shall include but which shall not be limited to the following provisions:

(*1*) The PHP agrees not to bill the beneficiary for services in excess of the cost-share or services for which payment is disallowed for failure to comply with requirements for preauthorization or concurrent care review.

(*2*) The PHP agrees not to bill the beneficiary for services excluded on the basis of § 199.4, paragraphs (g)(1) (not medically necessary), (g)(3) (inappropriate level of care) or (g)(7) (custodial care), unless the beneficiary has agreed in writing to pay for the care, knowing the specific care in question had been determined noncovered by CHAMPUS. (A general statement signed at admission as to financial liability does not fulfill this requirement.)

5. Section 199.7 is amended by revising paragraph (b)(3)(iv)(B)(*5*) to read as follows:

§ 199.7 Claims submissions, review, and payment.

* * * * *

(b) * * *

(3) * * *

(iv) * * *

(B) * * *

(*5*) Master treatment plan within 5 calendar days of admission for acute care, 10 days for RTC care, 5 days for full-day partial programs and within 7 days for half-day partial programs.

* * * * *

6. Section 199.14 is amended by adding a new paragraph (a)(2)(ix), to read as follows:

§ 199.14 Provider reimbursement methods.

(a) * * *

(2) * * *

(ix) *Per diem payment for psychiatric partial hospitalization services.*

(A) *In general.* Psychiatric partial hospitalization services authorized by § 199.4(b)(10) and provided by institutional providers authorized under § 199.6(b)(4)(xii), are reimbursed on the basis of prospectively determined, all-inclusive per diem rates. The per diem payment amount must be accepted as payment in full for all institutional services provided, including board, routine nursing services, ancillary services (includes art, music, dance, occupational and other such therapies), psychological testing and assessments, overhead and any other services for which the customary practice among similar providers is included as part of the institutional charges.

(B) *Services which may be billed separately.* The following services are not considered as included within the per diem payment amount and may be separately billed when provided by an authorized independent professional provider:

(*1*) *Psychotherapy sessions not included.* Professional services provided by an authorized professional provider (who is not employed by or under contract with the partial hospitalization program) for purposes of providing clinical patient care to a patient in the partial hospitalization program are not included in the per diem rate. They may be separately billed. Professional mental health benefits are limited to a maximum of one session (60 minutes individual, 90 minutes family, etc.) per authorized treatment day not to exceed five sessions in any calendar week.

(*2*) *Non-mental health related medical services.* Those services not normally included in the evaluation and assessment of a partial hospitalization program, non-mental health related medical services, may be separately billed when provided by an authorized independent professional provider. This includes ambulance services when medically necessary for emergency transport.

(C) *Per diem rate.* For any full day partial hospitalization program (minimum of 6 hours), the maximum per diem payment amount is 40 percent of the average inpatient per diem amount per case paid to both high and low volume psychiatric hospitals and units (as defined in § 199.14(a)(2)) by Federal census region during fiscal year 1990. The average will be based upon CHAMPUS claims processed to completion during the above period and updated to the current year using the same factors as used under the CHAMPUS mental health per diem reimbursement system (as described in § 199.14(a)(2)). A partial hospitalization program of less than 6 hours (with a minimum of three hours) will be paid a per diem rate of 75 percent of the rate for full-day program.

(D) *Other requirements.* No payment is due for leave days, for days in which treatment is not provided, or for days in which the duration of the program services was less than three hours.

* * * * *

Dated: June 28, 1993.

L.M. Bynum,

Alternate Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15540 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Public Land Order 6986

[OR–943–4210–06; GP3–219; OR–47417]

Withdrawal of National Forest System Lands To Protect the Scenic Segment of the Illinois Wild and Scenic River; Oregon

AGENCY: Bureau of Land Management, Interior.

ACTION: Public Land Order.

SUMMARY: This order withdraws 4,239.95 acres of National Forest System lands in the Siskiyou National Forest from mining for a period of 20 years for the Department of Agriculture, Forest Service, to protect the scenic, recreational, and fish/wildlife habitat values in the scenic segment of the Illinois Wild and Scenic River near Cave Junction, Oregon. The lands have been and remain open to mineral leasing.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Donna Kauffman, BLM Oregon State Office, P.O. Box 2965, Portland, Oregon 97208–2965, 503–280–7162.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988)), it is ordered as follows:

1. Subject to valid existing rights, the following described National Forest

System lands are hereby withdrawn from location and entry under the United States mining laws (30 U.S.C. ch. 2 (1988), but not from leasing under the mineral leasing laws, to protect the scenic, recreational, and fish/wildlife habitat values in the scenic section of the Illinois Wild and Scenic River between the mouth of Deer Creek and the mouth of Briggs Creek:

Willamette Meridian

Siskiyou National Forest

T. 38 S., R. 8 W.,
Sec. 7, SW¼NE¼, S½NW¼, N½SW¼, and SE¼SW¼, W½SE¼;
Sec. 18, N½NW¼NE¼ and N½NE¼NW¼.
T. 38 S., R. 9 W.,
Sec. 1, lot 9, SE¼SW¼, and S½SW¼SE¼;
Sec. 2, lots 2, 3, 4, and 7, SW¼NE¼, S½NW¼, SW¼, and W½SE¼;
Sec. 3, lots 1, 2, 3, and 4, S½N½, and N½N½S½;
Sec. 4, lots 1, 2, 3, and 4, NE¼SW¼NE¼, SE¼NE¼, and NE¼NE¼SE¼;
Sec. 5, lots 1 and 2;
Sec. 11, lot 1, NW¼NE¼, N½NE¼NW¼, and N½SE¼NE¼;
Sec. 12, lots 1 and 2, NW¼NE¼, NE¼NW¼, N½S½NW¼, N½SW¼NE¼, SE¼SW¼NE¼, SE¼NE¼, and NE¼NE¼SE¼.
T. 37 S., R. 9 W.,
Sec. 6, SW¼SE¼ and SE¼SW¼;
Sec. 7, lots 2 and 5, SW¼NE¼, E½NW¼, NE¼SW¼, and N½SE¼;
Sec. 8, lot 5 and lots 7 to 11, inclusive;
Sec. 16, SW¼NW¼SW¼, W½SW¼SW¼, and SE¼SW¼SW¼;
Sec. 17, lots 1 and 2, E½NE¼, SW¼NE¼, and SE¼;
Sec. 20, N½NE¼NE¼, SE¼NE¼NE¼, E½SE¼NE¼, E½SE¼, SE¼NW¼SE¼, and E½SW¼SE¼;
Sec. 21, W½E½NW¼, W½NW¼, W½NE¼SW¼, NW¼SW¼, N½SW¼SW¼, and SW¼SW¼SW¼;
Sec. 28, W½W½NW¼ and W½NW¼SW¼;
Sec. 29, E½NE¼, E½W½NE¼, and SE¼;
Sec. 32, lots 1 to 6, inclusive, and N½NE¼;
Sec. 33, SW¼NW¼NW¼, SW¼NW¼, S½SE¼NW¼, SW¼, NW¼NW¼SE¼, S½NW¼SE¼, and S½SE¼.

The areas described aggregate 4,239.95 acres in Josephine County.

2. The withdrawal made by this order does not alter the applicability of those public land laws governing the use of National Forest System lands under lease, license, or permit, or governing the disposal of its mineral or vegetative resources other than under the mining laws.

3. This withdrawal will expire 20 years from the effective date of this order unless, as a result of a review conducted before the expiration date pursuant to Section 204(f) of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714(f) (1988), the Secretary determines that the withdrawal shall be extended.

Bob Armstrong,
Assistant Secretary of the Interior.

[FR Doc. 93–14594 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–33–M

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43 CFR Public Land Order 6988

[UT–942–4214–06; UT–60665]

Withdrawal of Public Land for the Pavant Butte Area; Utah

AGENCY: Bureau of Land Management, Interior.

ACTION: Public Land Order.

SUMMARY: This order withdraws 930 acres of public land from surface entry and mining for a period of 20 years for the Bureau of Land Management to protect the Pavant Butte area, near Fillmore, Utah. The withdrawal will protect the crucial raptor nesting habitat for the peregrine falcon, golden eagle, and the prairie falcon. It will also protect the unique geologic features of Pavant Butte for scientific and geologic studies. An additional 640 acres of non-Federal land, if acquired by the United States, would also be withdrawn by this order. The land has been and will remain open to mineral leasing.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Randy Massey, BLM Utah State Office, P.O. Box 45155, Salt Lake City, Utah 84145–0155, 801–539–4119.

By virtue of the authority vested in the Secretary of the Interior by section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), it is ordered as follows:

1. Subject to valid existing rights, the following described public land is hereby withdrawn from settlement, sale, location, or entry under the general land laws, including the United States mining laws (30 U.S.C. ch. 2 (1988)), but not from leasing under the mineral leasing laws, to protect the Pavant Butte area:

Salt Lake Meridian

T. 19 S., R. 6 W.,
Sec. 28, NW¼NW¼SW¼, S½NW¼SW¼, SW¼SW¼, and W½SE¼SW¼;
Sec. 29, SW¼NE¼, W½SE¼NE¼, SE¼SE¼NE¼, S½NW¼, and S½;
Sec. 30, E½SE¼NE¼ and E½SE¼;
Sec. 31, E½NE¼, E½W½NE¼, NE¼SE¼, NE¼NW¼SE¼, and NE¼SE¼SE¼;
Sec. 33, W½NE¼NW¼, NW¼NW¼, N½SW¼NW¼, and SW¼SW¼NW¼.

The area described contains 930 acres in Millard County.

2. The following described non-Federal land, if subsequently acquired by the United States, will be subject to the terms and conditions of this withdrawal:

Salt Lake Meridian

T. 19 S., R. 6 W.,
Sec. 32.

The area described contains 640 acres in Millard County.

3. The withdrawal made by this order does not alter the applicability of those public land laws governing the use of the land under lease, license, or permit, or governing the disposal of their mineral or vegetative resources other than under the mining laws.

4. This withdrawal will expire 20 years from the effective date of this order unless, as a result of a review conducted before the expiration date pursuant to section 204(f) of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714(f) (1988), the Secretary determines that the withdrawal shall be extended.

Dated: June 18, 1993.

Bob Armstrong.
Assistant Secretary of the Interior.

[FR Doc. 93–15466 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–DQ–M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 92–60; RM–7916]

Radio Broadcasting Services; Yankeetown, FL

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document allots Channel 242A to Yankeetown, Florida, as that community's first local FM service, at the request of William R. Lacy. See 57 FR 11459, April 30, 1992. Channel 242A can be allotted to Yankeetown in compliance with the Commission's minimum distance separation requirements without the imposition of a site restriction. The coordinates for Channel 242A at Yankeetown are North Latitude 29–01–47 and West Longitude 82–42–58. With this action, this proceeding is terminated.

DATES: Effective August 9, 1993. The window period for filing applications for Channel 242A at Yankeetown, Florida, will open on August 10, 1993, and close on September 9, 1993.

FOR FURTHER INFORMATION CONTACT: Nancy J. Walls, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 92–60, adopted June 7, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, Inc., (202) 857–3800, 1919 M Street, NW., room 246, of 2100 M Street, NW., suite 140, Washington, DC 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

PART 73—[AMENDED]

1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Florida, is amended by adding Yankeetown, Channel 242A.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15531 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

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47 CFR Part 73

[MM Docket No. 93–14; RM–8155]

Radio Broadcasting Services; Bethany Beach, DE

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document substitutes Channel 240B1 for Channel 240A at Bethany Beach, Delaware, at the request of Roger A. Akin and Banking Services Corp., Co-Receivers of KAT Broadcasting Corporation. See 58 FR 15321, March 22, 1993. Channel 240B1 can be allotted to Bethany Beach, Delaware, in compliance with the Commission's minimum distance separation requirements with a site restriction of 0.1 kilometers (0.1 miles) northwest of the community. The coordinates are North Latitude 38–32–24 and West Longitude 75–03–23. With this action, this proceeding is terminated.

DATES: Effective August 9, 1993.

FOR FURTHER INFORMATION CONTACT: Nancy J. Walls, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 93–14, adopted June 8, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, Inc., (202) 857–3800, 1919 M Street, NW., room 246, or 2100 M Street, NW., suite 140, Washington, DC 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

PART 73—[AMENDED]

1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Delaware, is amended by removing Channel 240A and adding Channel 240B1 at Bethany Beach.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15532 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

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47 CFR Part 73

[MM Docket No. 93–18; RM–8173]

Radio Broadcasting Services; Coos Bay, OR

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission, at the request of Kenton Sturdevant, allots Channel 228A to Coos Bay, Oregon, as the community's third local FM service. See 58 FR 11205, February 24, 1993. Although the Notice of Proposed Rule Making proposed to allot Channel 271A to Coos Bay, the Commission is instead allotting Channel 228A to avoid a conflict with the pending application (BPH–930222IG) of Station KGAL–FM, Brownsville, Oregon, effectuating the upgrading of its facility from Channel 272A to Channel 272C1. Channel 228A can be allotted to Coos Bay in compliance with the Commission's minimum distance separation requirements without the imposition of a site restriction, at coordinates North Latitude 43–22–00 and West Longitude 124–12–54. With this action, this proceeding is terminated.

DATE: Effective August 9, 1993. The window period for filing applications will open on August 10, 1993, and close on September 9, 1993.

FOR FURTHER INFORMATION CONTACT: Leslie K. Shapiro, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 93–18, adopted June 17, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3800, 2100 M Street, NW., suite 140, Washington, DC 20037.

List of Subjects in 47 CFR Part 73

Radio braodcasting.

PART 73—[AMENDED]

1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Oregon, is amended by adding Channel 228A at Coos Bay.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15535 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

Proposed Rules

Federal Register
Vol. 58, No. 125
Thursday, July 1, 1993

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 29

[Docket No. 93–ASW–4; Notice No. SC–93–4–SW]

Special Condition; Aerospatiale Model AS–365N1 and AS–365N2 "Dauphin" Helicopters, Electronic Flight Instrument System

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed special condition.

SUMMARY: This notice proposes a special condition for the Aerospatiale Model AS–365N1 and AS–365N2 "Dauphin" helicopters modified by American Eurocopter Corporation. These helicopters will have a novel or unusual design feature associated with the Electronic Flight Instrument System. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for the protection of these critical function systems from the effects of external high intensity radiated fields (HIRF). This notice contains the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the airworthiness standards for transport category rotorcraft of the Federal Aviation Regulations.

DATES: Comments must be received on or before August 2, 1993.

ADDRESSES: Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration (FAA), Office of the Assistant Chief Counsel, Attn: Rules Docket No. 93–ASW–4, Fort Worth, Texas 76193–0007, or delivered in duplicate to the Office of the Assistant Chief Counsel, Building 3B, room 158, 4400 Blue Mound Road, Fort Worth, Texas. Comments must be marked Docket No. 93–ASW–4. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 9 a.m. and 3 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Robert McCallister, FAA, Rotorcraft Directorate, Policy and Procedures Group, Forth Worth, Texas 76193–0112; telephone (817) 624–5121.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed special condition by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator before taking action on this proposal. The special condition proposed in this notice may be changed in light of comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 93–ASW–4." The postcard will be date and time stamped and returned to the commenter.

Background

On April 26, 1993, American Eurocopter Corporation, Grand Prairie, Texas, notified the FAA that they intended to modify and issue a Supplemental Type Certificate under their Designated Alteration Station authorization for installation of an Electronic Flight Instrument System in Aerospatiale AS–365N1 and AS–365N2 "Dauphin" helicopters. Each one of these models is a 13 passenger, two engine, 9,370 pound transport category helicopter.

Type Certification Basis

The certification basis established for the Aerospatiale Model AS–365N1 and AS–365N2 "Dauphin" helicopters includes: Federal Aviation Regulation (FAR) § 21.29 and part 29 effective February 1, 1965, Amendments 29–1 through 29–11; Airworthiness Criteria for Helicopter Instrument Flight, dated December 15, 1978, for Instrument Flight Rule (IFR) certification; and Longitudinal Static Stability § 29.173. Aerospatiale has elected to comply with part 29 Amendments 29–12 through 29–16 except for § 29.397 relating to rotor brakes.

If the Administrator finds that the applicable airworthiness regulations do not contain adequate or appropriate safety standards for these helicopters because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16 to establish a level of safety equivalent to that established in the regulations.

Special conditions, as appropriate, are issued in accordance with § 11.49 of the FAR after public notice, as required by § § 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.101(b)(2).

Discussion

The Aerospatiale Model AS–365N1 and AS–365N2 "Dauphin" helicopters, at the time of the application for modification by American Eurocopter Corporation, were identified as incorporating one and possibly more electrical, electronic, or combination of electrical and electronic (electrical/electronic) systems that will perform functions critical to the continued safe flight and landing of the helicopters. The electronic flight instrument system performs the attitude display function. The display of attitude, altitude, and airspeed is critical to the continued safe flight and landing of the helicopters for IFR operations in instrument meteorological conditions. After the design is finalized, American Eurocopter Corporation will provide the FAA with a preliminary hazard analysis that will identify any other critical functions performed by the electrical/electronic systems that are critical to the continued safe flight and landing of the helicopters.

Recent advances in technology have prompted the design of aircraft that include advanced electrical and electronic systems that perform functions required for continued safe flight and landing. However, these advanced systems respond to the transient effects of induced electrical current and voltage caused by the high

intensity radiated fields (HIRF) incident on the external surface of the helicopters. These induced transient currents and voltages can degrade the performance of the electrical/electronic systems by damaging the components or by upsetting the systems' functions.

Furthermore, the electromagnetic environment has undergone a transformation not envisioned by the current application of FAR § 29.1309(a). Higher energy levels radiate from operational transmitters currently used for radar, radio, and television; the number of transmitters has increased significantly.

Existing aircraft certification requirements are inappropriate in view of these technological advances. In addition, the FAA has received reports of some significant safety incidents and accidents involving military aircraft equipped with advanced electrical/electronic systems when they were exposed to electromagnetic radiation.

The combined effects of technological advances in helicopter design and the changing environment have resulted in an increased level of vulnerability of the electrical and electronic systems required for the continued safe flight and landing of the helicopters. Effective measures to protect these helicopters against the adverse effects of exposure to HIRF will be provided by the design and installation of these systems. The following primary factors contributed to the current conditions: (1) Increased use of sensitive electronics that perform critical functions, (2) reduced electromagnetic shielding afforded helicopter systems by advanced technology airframe materials, (3) adverse service experience of military aircraft using these technologies, and (4) an increase in the number and power of radio frequency emitters and the expected increase in the future.

The FAA recognizes the need for aircraft certification standards to keep pace with technological developments and a changing environment and, in 1986, initiated a high priority program to (1) determine and define electromagnetic energy levels; (2) develop guidance material for design, test, and analysis; and (3) prescribe and promulgate regulatory standards.

The FAA participated with industry and airworthiness authorities of other countries to develop internationally recognized standards for certification.

The FAA and airworthiness authorities of other countries have identified a level of HIRF environment that a helicopter could be exposed to during IFR operations. While the HIRF requirements are being finalized, the FAA is adopting a special condition for the certification of aircraft that employ electrical/electronic systems that perform critical functions. The accepted maximum energy levels that civilian helicopter system installations must withstand for safe operation are based on surveys and analysis of existing radio frequency emitters. This special condition will require the helicopters' electrical/electronic systems and associated wiring to be protected from these energy levels. These external threat levels are believed to represent the worst-case exposure for a helicopter operating under IFR.

The HIRF environment specified in this proposed special condition is based on many critical assumptions. With the exception of takeoff and landing at an airport, one of these assumptions is the aircraft would be not less than 500 feet above ground level (AGL). Helicopters operating under visual flight rules (VFR) routinely operate at less than 500 feet AGL and perform takeoffs and landings at locations other than controlled airports. Therefore, it would be expected that the HIRF environment experienced by a helicopter operating VFR may exceed the defined environment by 100 percent or more.

This special condition will require the systems that perform critical functions, as installed in the aircraft, to meet certain standards based on either a defined HIRF environment or a fixed value using laboratory tests.

The applicant may demonstrate that the operation and operational capability of the installed electrical/electronic systems that perform critical functions are not adversely affected when the aircraft is exposed to the defined HIRF environment. The FAA has determined that the environment defined in Table 1 is acceptable for critical functions in helicopters operating at or above 500 feet AGL. For critical functions of helicopters operating at less than 500 feet AGL, additional factors must be considered.

The applicant may also demonstrate by a laboratory test that the electrical/electronic systems that perform critical functions can withstand a peak electromagnetic field strength in a frequency range of 10 KH_z to 18 GH_z. If a laboratory test is used to show compliance with the defined HIRF environment, no credit will be given for signal attenuation due to installation. A level of 100 v/m and other considerations, such as an alternate technology backup that is immune to HIRF, are appropriate for critical functions during IFR operations. A level of 200 v/m and further considerations, such as an alternate technology backup that is immune to HIRF, are more appropriate for critical functions during VFR operations.

Applicants must perform a preliminary hazard analysis to identify electrical/electronic systems that perform critical functions. The term "critical" means those functions whose failure would contribute to or cause a failure condition that would prevent the continued safe flight and landing of the helicopters. The systems identified by the hazard analysis as performing critical functions are required to have HIRF protection.

A system may perform both critical and noncritical functions. Primary electronic flight display systems and their associated components perform critical functions such as attitude, altitude, and airspeed indications. HIRF requirements would apply only to the systems that perform critical functions.

Compliance with HIRF requirements will be demonstrated by tests, analysis, models, similarity with existing systems, or a combination of these methods. The two basic options of either testing the rotocraft to the defined environment or laboratory testing may not be combined. The laboratory test allows some frequency areas to be under tested and requires other areas to have some safety margin when compared to the defined environment. The areas required to have some safety margin are those that have been, by past testing, shown to exhibit greater susceptibility to adverse effects from HIRF; and laboratory tests, in general, do not accurately represent the aircraft installation. Service experience alone will not be acceptable since such experience in normal flight operations may not include an exposure to HIRF. Reliance on a system with similar design features for redundancy, as a means of protection against the effects of external HIRF, is generally insufficient because all elements of a redundant system are likely to be concurrently exposed to the radiated fields.

The modulation that represents the signal most likely to disrupt the operation of the system under test, based on its design characteristics, should be selected. For example, flight control systems may be susceptible to 3 H_z square wave modulation while the video signals for electronic display systems may be susceptible to 400 H_z sinusoidal modulation. If the worst-case modulation is unknown or cannot be determined, default modulations may be used. Suggested default values are a 1 KH_z sine wave with 80 percent depth of modulation in the frequency range from 10 KH_z to 400 MH_z and 1 KH_z square wave with greater than 90 percent depth

of modulation from 400 MH_z to 18 GH_z. For frequencies where the unmodulated signal would cause deviations from normal operation, several different modulating signals with various waveforms and frequencies should be applied.

Acceptable system performance would be attained by demonstrating that the critical function components of the system under consideration continue to perform their intended function during and after exposure to required electromagnetic fields. Deviations from system specifications may be acceptable but must be independently assessed by the FAA on a case-by-case basis.

TABLE 1.—FIELD STRENGTH VOLTS/METER

Frequency	Peak	Average
10–100 KH_z	50	50
100–500	60	60
500–2000	70	70
2–30MH_z	200	200
30–100	30	30
100–200	150	33
200–400	70	70
400–700	4020	935
700–1000	1700	170
1–2 GH_z	5000	990
2–4	6680	840
4–6	6850	310
6–8	3600	670
8–12	3500	1270
12–18	3500	360
18–40	2100	750

Conclusion

This action affects only certain unusual or novel design features on two models of helicopters. It is not a rule of general applicability and affects only the applicant who applied to the FAA for approval of these features on the affected helicopters.

List of Subjects in 14 CFR Part 29

Aircraft, Air transportation, Aviation safety, Rotorcraft, Safety.

The authority citation for this special condition is as follows:

Authority: 49 U.S.C. 1344, 1348(c), 1352, 1354(a), 1355, 1421 through 1431, 1502, 1651(b)(2); 42 U.S.C. 1857f–10, 4321 et seq.; E.O. 11514; 49 U.S.C. 106(g).

The Proposed Special Condition

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration (FAA) proposes the following special condition as a part of the type certification basis for the Aerospatiale Model AS–365N1 and AS–365N2 "Dauphin" helicopters.

Protection for Electrical and Electronic Systems From High Intensity Radiated Fields.

Each system that performs critical functions must be designed and installed to ensure that the operation and operational capabilities of these critical functions are not adversely affected when the helicopters are exposed to high intensity radiated fields external to the helicopters.

Issued in Forth Worth, Texas, on June 23, 1993.

Eric D. Bries,

Acting Manager, Aircraft Certification Service, Rotorcraft Directorate.

[FR Doc. 93–15562 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–13–M

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14 CFR Part 39

[Docket No. 92–NM–194–AD]

Airworthiness Directives; Fokker Model F–27 Series Airplanes, Excluding Mark 050 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Proposed rule; withdrawal.

SUMMARY: This action withdraws a notice of proposed rulemaking (NPRM) that proposed a new airworthiness directive (AD), applicable to certain Fokker Model F–27 series airplanes. That action would have required repetitive borescope inspections to detect fatigue-related cracks of the lower flange of the wing outer flap rib, repetitive high frequency eddy current (HFEC) inspections to detect fatigue-related cracks of the lower skin of the wing outer flaps, repair of cracked parts, and submission of an inspection report. Since the issuance of the NPRM, the Federal Aviation Administration (FAA) has received new data that the proposed inspections are unnecessary to provide an acceptable level of safety, and that the procedures currently required by a separate existing AD will preclude structural failure of the wing outer flaps. Accordingly, the proposed rule is withdrawn.

FOR FURTHER INFORMATION CONTACT: Tim Dulin, Aerospace Engineer, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (206) 227–2141; fax (206) 227–1320.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to add a new airworthiness directive (AD), applicable to certain Fokker Model F–27 series airplanes, was published in the Federal Register on February 18, 1993 (58 FR 8914). The proposed rule would have required repetitive borescope inspections to detect fatigue-related cracks of the lower flange of the wing outer flap rib, repetitive high frequency eddy current (HFEC) inspections to detect fatigue-related cracks of the lower skin of the wing outer flaps, repair of cracked parts, and submission of an inspection report. That action was prompted by reports of fatigue-related cracks found in the lower skin and rib of the wing outer flaps. The proposed actions were intended to prevent structural failure of the wing outer flaps.

Since issuance of that proposal, the FAA has reconsidered its position on the action, based on comments submitted to the notice:

One commenter requests that the FAA withdraw the proposal, since it proposes to require the accomplishment of certain inspections that currently are required by a separate existing AD. This commenter points out that the proposed inspections are defined in the revised Fokker F–27 Structural Integrity Program (SIP) Document, and that the implementation of this document currently is required by AD 92–19–07, Amendment 39–8365 (57 FR 42693, September 16, 1992). The commenter also states that the November 1, 1991, revision to the F–27 SIP Document No. 27438, Part I, incorporates the inspection requirements of Fokker Service Bulletin F27/57–67, dated October 11, 1991, which was referenced in and would have been required by the proposal. The commenter asserts that since these inspections already are required by AD 92–19–07, the proposal would not provide a higher level of safety, but would cause an unnecessary administrative burden for operators.

Another commenter requests that the FAA withdraw the proposal, since the inspection and repair requirements of Netherlands Airworthiness Directive BLA 91–122, dated October 18, 1991, have been canceled because they are redundant to the inspections specified in the revised Fokker F–27 SIP Document.

Upon further consideration, the FAA concurs that the inspections that would have been required by the proposal have been incorporated into a revision of the Fokker F–27 SIP Document, the implementation of which is currently required by AD 92–19–07. The FAA has determined that these inspections currently provide an acceptable level of safety to preclude structural failure of the wing outer flaps. Accordingly, the proposed rule is considered unnecessary and is hereby withdrawn.

Withdrawal of this notice of proposed rulemaking constitutes only such action,

and does not preclude the agency from issuing another notice in the future, nor does it commit the agency to any course of action in the future.

Since this action only withdraws a notice of proposed rulemaking, it is neither a proposed nor a final rule and therefore, is not covered under Executive Order 12291, the Regulatory Flexibility Act, or DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979).

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Withdrawal

Accordingly, the notice of proposed rulemaking, Docket 92–NM–194–AD, published in the **Federal Register** on February 18, 1993 (58 FR 8914), is withdrawn.

Issued in Renton, Washington, on June 25, 1993.

James V. Devany,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–15506 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–13–P

FEDERAL TRADE COMMISSION

16 CFR Part 244

Industry Guide: Guides for the Greeting Card Industry Relating to Discriminatory Practices

AGENCY: Federal Trade Commission.

ACTION: Request for public comment on proposed repeal of guides.

SUMMARY: The Federal Trade Commission announces its intention to review the guides concerning discriminatory promotional allowances in the greeting card industry (the "Greeting Card Guides" or "Guides"). Since the Commission has recently published revised general guidelines on promotional allowances, it believes that the industry-specific guidelines no longer serve a useful purpose. The Commission invites public comment on how the Greeting Card Guides currently affect manufacturers, retailers, consumers, and others, and whether the Guides should remain in effect without changes or should be repealed.

DATES: Written comments will be accepted until August 2, 1993.

ADDRESSES: Written comments should be addressed to the Secretary, Federal Trade Commission, Sixth Street and Pennsylvania Avenue, NW., Washington DC 20580. All comments should be captioned "Comment—Greeting Card Guides."

FOR FURTHER INFORMATION CONTACT: Neil Averitt, Esq., Office of Policy and Evaluation, Bureau of Competition, Federal Trade Commission, Washington, DC 20580 (202) 326–2885.

SUPPLEMENTARY INFORMATION:

Part A—Background Information

This notice is published pursuant to the Federal Trade Commission Act, 15 U.S.C. 41 *et seq.*; the Robinson-Patman Act, 15 U.S.C. 13; and the provisions of part 1, subpart A of the Commission's Rules of Practice, 16 CFR 1.6. This authority permits the Commission to promulgate, modify and repeal industry guides that will help members of the public identify and avoid methods of competition that are unfair within the meaning of section 5(a)(1) of the FTC Act, including methods of competition that would also violate the Robinson-Patman Act.

The Greeting Card Guides state that suppliers should not directly or indirectly discriminate in price between competing purchasers of greeting cards, except insofar as price differences may be justified by different costs of service or by the need to meet competitors' prices. The Guides also state that promotional assistance should be made available on proportionately equal terms to all competing customers. The Greeting Card Guides were adopted on October 18, 1968, and became effective on November 15, 1968.

Part B—Objectives and Analysis

The objective of this review is to determine whether the Commission's Greeting Card Guides should be repealed. In this connection the Commission seeks evidence on whether industry-specific guidelines such as the Greeting Card Guides are the most useful and efficient means of communicating enforcement policies. The Commission notes that the Greeting Card Guides consist largely of general statements of the law of price discrimination and relatively little industry-specific guidance. The Commission also notes that the section dealing with discriminatory promotional allowances may have been made less necessary by the subsequent publication of more general guidelines on that subject. See Guides for Advertising Allowances and Other Merchandising Payments and Services (the "Fred Meyer Guides"), 16 CFR part 240.

The Commission seeks evidence as to whether there are still benefits from the Guides, and, if so, whether those benefits are greater than their costs, in order to assist in reaching a determination on this matter.

The Commission is undertaking this review as part of its ongoing program of evaluating industry guides to determine their current effectiveness and impact. Based on the information currently in its possession, the Commission believes that the Guides no longer serve the public interest and should be repealed.

Part C—Alternative Actions

The Commission does not plan to consider alternatives to repealing the Greeting Card Guides or leaving them in effect in their present form.

Part D—Requests for Comment

Members of the public are invited to comment on any issues or concerns they believe are relevant or appropriate to the Commission's review of the Greeting Card Guides. A comment that includes the reasoning or basis for a proposition is likely to be more persuasive than a comment without supporting information. The Commission requests that factual data upon which the comments are based be submitted with the comments. The list of issues below is designed to assist the public in commenting on relevant matters and should not be construed as a limitation on the issues or on the scope of public comment.

Questions

(1) Do members of the greeting card industry currently make use of the Guides for information about the standards applicable to price discrimination or discriminatory promotional allowances?

(2) Do the Guides contain information about price discrimination that is usefully tailored to the specific circumstances of the industry, or could equally helpful guidance be obtained from more general sources?

(3) Do the Guides contain information about promotional allowances that is usefully tailored to the specific circumstances of the industry, or could equally helpful guidance be obtained from the more general Fred Meyer Guides?

(4) What are the costs and benefits of the Greeting Card Guides?

(5) Should the Guides be kept in effect or should they be repealed?

Part E—Proposed Repeal of Industry Guide

Notice is hereby given that the Federal Trade Commission, pursuant to the Federal Trade Commission Act, *as amended*, 15 U.S.C. 41 *et seq.*; the Robinson-Patman Act, 15 U.S.C. 13; and

the provisions of part 1, subpart A of the Commission's Procedures and Rules of Practice, 16 CFR 1.6, has initiated a proceeding for the repeal of the industry guide concerning discriminatory practices in the greeting card industry.

List of Subjects in 16 CFR Part 244

Greeting card industry, Trade practices, Price discrimination, Promotional allowances, Unfair methods of competition.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 93–15547 Filed 6–30–93; 8:45 am]

BILLING CODE 6750–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 375

[Docket No. RM93–17–000]

License Termination

Issued June 24, 1993.

AGENCY: Federal Regulatory Commission, DOE.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Federal Energy Regulatory Commission (Commission) is proposing to revise its regulations to authorize the Director of the Commission's Office of Hydropower Licensing to terminate a license for failure to commence construction after first giving the licensee 30 days' written notice. The current regulation requires 90 days' notice.

DATES: Comments are due on or before August 2, 1993.

ADDRESSES: An original and 14 copies of written comments must be filed. All filings should refer to Docket No. RM93–17–000 and should be addressed to: Office of the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426.

FOR FURTHER INFORMATION CONTACT: Barry Smoler, Office of the General Counsel, Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, (202) 208–1269.

SUPPLEMENTARY INFORMATION: In addition to publishing the full text of this document in the **Federal Register**, the Commission also provides all interested persons an opportunity to inspect or copy the contents of this document during normal business hours in room 3104, 941 North Capitol Street, NE., Washington, DC 20426.

The Commission Issuance Posting System (CIPS), an electronic bulletin board service, provides access to the texts of formal documents issued by the Commission. CIPS is available at no charge to the user and may be accessed using a personal computer with a modem by dialing (202) 208–1397. To access CIPS, set your communications software to use 300, 1200, or 2400 bps, full duplex, no parity, 8 data bits, and 1 stop bit. CIPS can also be accessed at 9600 bps by dialing (202) 208–1781. The full text of this rule will be available on CIPS for 30 days from the date of issuance. The complete text on diskette in Wordperfect format may also be purchased from the Commission's copy contractor, La Dorn Systems Corporation, located in room 3104, 941 North Capitol Street, NE., Washington, DC 20426.

I. Introduction

The Federal Energy Regulatory Commission (Commission) is proposing to revise § 375.314(f)(1) of its regulations so as to authorize the Director of the Commission's Office of Hydropower Licensing (Director) to terminate a license for failure to commence construction after first giving the licensee 30 days' written notice. The current regulation requires 90 days' notice.

II. Background and Discussion

Part I of the Federal Power Act (FPA)[1] authorizes the Commission to issue licenses for the construction, maintenance, and operation of hydropower projects. Section 13 of the FPA(2) requires the licensee to commence construction of the project works within the time fixed in the license, which shall not be more than two years after issuance of the license. Section 13 also authorizes the Commission to grant one extension of that deadline, the extension to be for no more than two additional years. Section 13 further provides that if the licensee does not commence construction within the time prescribed in the license as it may have been extended by the Commission, then "after due notice given, the license shall, as to such project works or part thereof, be terminated upon written order of the Commission."

Section 375.314(f) of the Commission's regulations authorizes the Director or the Director's designee to:

(f) Issue an order pursuant to section 13 of the Federal Power Act to terminate a license granted under Part I of the Federal Power Act if the licensee fails to commence actual construction of the project works within the time prescribed in the license, provided:

(1) The Director gives notice by certified mail to the licensee of probable termination no less than 90 days prior to the issuance of the termination order, and

(2) The licensee does not oppose the issuance of the termination order.

The Commission proposes to revise paragraph (f)(1) so that the notice requirement would be 30 days rather than 90 days.

Most of the Commission's license termination proceeds are initiated for failure to commence construction after having received a one-time extension of two years in addition to the two-year period prescribed in the license. Thus, the notices are usually issued after a four-year period in which to commence construction has expired and no construction has occurred. By that time, the licensee's unwillingness or inability to commence construction has in virtually every case become common knowledge to both the licensee and the Commission's staff such that the notice becomes a procedural formality that confirms the obvious. Reducing the waiting period would expedite the processing of the Commission's license termination workload.

III. Regulatory Flexibility Act Certification

The Regulatory Flexibility Act[3] generally requires a description and analysis of rules that will have a significant economic impact on a substantial number of small entities. The rule proposed herein is purely procedural in nature. The Commission certifies that this rule would not have a "significant economic impact on a substantial number of small entities."

IV. Environmental Statement

The Commission concludes that promulgating the proposed rule would not represent a major federal action having a significant adverse effect on the human environment under the Commission's regulations implementing the National Environmental Policy Act.[4] The proposed rule is procedural in nature and therefore falls within the categorical exemptions provided in the Commission's regulations. Consequently, neither an environmental impact statement nor an environmental assessment is required.[5]

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[1] 16 U.S.C. 792–823(b).

[2] 16 U.S.C. 806.

[3] 5 U.S.C. 601–612.

[4] 52 FR 47,897 (Dec. 17, 1987), FERC Stats. & Regs. ¶ 30,783 (1987) (codified at 18 CFR part 380).

[5] See 18 CFR 380.4(a)(1).

V. Comment Procedure

The Commission invites interested persons to submit written comments on the matters proposed in this notice. An original and 14 copies of the written comments must be filed with the Commission no later than August 2, 1993. Comments should be submitted to the Office of the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, and should refer to Docket No. RM93-17-000.

Written comments will be placed in the public files of the Commission and will be available for inspection at the Commission's Public Reference Room, at 825 North Capitol St., NE., Washington, DC 20426, during regular business hours.

List of Subjects in 18 CFR Part 375

Authority delegations (Government agencies), Seals and insignia, Sunshine Act.

In consideration of the foregoing, the Commission proposes to amend part 375, chapter I, title 18 of the Code of Federal Regulations as set forth below.

By direction of the Commission.

Lois D. Cashell,

Secretary.

PART 375—THE COMMISSION

1. The authority citation for part 375 continues to read as follows:

Authority: 5 U.S.C. 551-557; 15 U.S.C. 717-717w, 3301-3432; 16 U.S.C. 791-828r, 791a note, 2601-2645; 42 U.S.C. 7107-7532.

2. In § 375.314, paragraph (f)(1) is revised to read as follows:

§ 375.314 Delegations to the Director of the Office of Hydropower Licensing.

* * * * *

(f) * * *

(1) The Director gives notice by certified mail to the licensee of probable termination no less than 30 days prior to the issuance of the termination order.

* * * * *

[FR Doc. 93-15484 Filed 6-30-93; 8:45 am]

BILLING CODE 6717-01-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 876

[Docket No. 92N-0445]

Gastroenterology-Urology Devices; Effective Date of the Requirement for Premarket Approval of the Penile Inflatable Implant; Extension of Comment Period

AGENCY: Food and Drug Administration, HHS.

ACTION: Proposed rule; opportunity to request a change in classification; extension of comment period.

SUMMARY: The Food and Drug Administration (FDA) is extending the comment period on the proposed rule to require the filing of a premarket approval application (PMA) or a notice of completion of a product development protocol (PDP) for the penile inflatable implant, a medical device. FDA is taking this action in response to requests for an extension of the comment period.

DATES: Written comments must be submitted by August 27, 1993.

ADDRESSES: Submit written comments to the Dockets Management Branch (HFA-305), Food and Drug Administration, rm. 1-23, 12420 Parklawn Dr., Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Mark O. Kramer, Center for Devices and Radiological Health (HFZ-470), Food and Drug Administration, 1390 Piccard Dr., Rockville, MD 20850, 301-427-1194.

SUPPLEMENTARY INFORMATION: In the **Federal Register** of April 28, 1993 (58 FR 25902), FDA issued a proposed rule to require the filing of a PMA or a notice of completion of a PDP for the penile inflatable implant. Interested persons were given until June 28, 1993, to submit written comments on the proposed rule.

FDA received two requests for an extension of the comment period for 120 days. The requests stated that additional time was needed to enable industry, consumer groups, physicians, patient groups, and professional associations to respond with meaningful comments in light of the complexity of the issues involved.

FDA agrees in part with the requests for an extension and is granting an additional 60 days for the preparation of comments. Considering the public health significance of the regulation, FDA believes that an extension of 120 days would not be justified.

Interested persons may, on or before August 27, 1993, submit to the Dockets Management Branch (address above) written comments regarding the proposal. Two copies of any comments are to be submitted, except that individuals may submit one copy. Comments are to be identified with the docket number found in brackets in the heading of this document. Received comments may be seen in the office above between 9 a.m. and 4 p.m., Monday through Friday.

Dated: June 24, 1993.

Michael R. Taylor,

Deputy Commissioner for Policy.

[FR Doc. 93-15641 Filed 6-28-93; 4:57 pm]

BILLING CODE 4160-01-F

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Housing Federal Housing Commissioner

24 CFR Parts 880, 881, 883, 884, and 886

[Docket No. R-93-1664; FR-3413-P-01]

RIN 2502-AF41

Income Eligibility for Tenancy in New Construction Units

AGENCY: Office of the Assistant Secretary for Housing, HUD.

ACTION: Proposed rule.

SUMMARY: This proposed rule would amend the section 8 Housing Assistance Payments program regulations for new construction and substantial rehabilitation to comply with section 151 of the Housing and Community Development Act of 1992. Section 151 requires that the Secretary promulgate regulations to implement section 555 of the National Affordable Housing Act of 1990, which requires that section 8 newly constructed and substantially rehabilitated projects assisted under section 8(b)(2) as it existed before October 1, 1983, and with a contract for assistance under such section, be reserved for occupancy by low-income and very low-income families.

DATES: Comment due date: August 2, 1993.

ADDRESSES: Interested persons are invited to submit comments regarding this rule to the Rules Docket Clerk, room 10276, Office of General Counsel, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-0500. Comments should refer to the above

docket number and title. A copy of each comment submitted will be available for public inspection and copying between 7:30 a.m. and 5:30 p.m. weekdays at the above address. Facsimile (FAX) comments are not acceptable

FOR FURTHER INFORMATION CONTACT: James J. Tahash, Director, Planning and Procedures Division, Office of Multifamily Housing Management, room 6182, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410, telephone (202) 708–3944. Hearing or speech-impaired individuals may call HUD's TDD number (202) 708–4594. (These telephone numbers are not toll-free.)

SUPPLEMENTARY INFORMATION:

I. Background

Section 151 of the Housing and Community Development Act of 1992, Public Law 102–550, approved October 28, 1992, requires that the Secretary promulgate regulations implementing section 555 of the Cranston-Gonzalez National Affordable Housing Act of 1990, Public Law 101–625, approved November 28, 1990 (NAHA). Section 555 of NAHA provides that any dwelling unit in any housing constructed or substantially rehabilitated pursuant to assistance provided under section 8(b)(2) of the U.S. Housing Act of 1937, as that section existed before October 1, 1983, and with a contract for assistance under that section, shall be reserved for occupancy by low-income and very low-income families.

The Department administers six section 8 programs that involve newly constructed or substantially rehabilitated housing, and which, are therefore, affected by section 555 of NAHA. They are: (1) The section 8 New Construction Program, 24 CFR part 880; (2) the Section 8 Substantial Rehabilitation Program, 24 CFR part 881; (3) the State Housing Agencies program (insofar as it involves new construction and substantial rehabilitation), 24 CFR part 883; (4) the New Construction Set-Aside for Section 515 Rural Rental Housing Projects Program, 24 CFR part 884; (5) the Section 202 Loans for Housing for the Elderly or Handicapped Program, 24 CFR part 885 (except for projects for the nonelderly handicapped receiving rental assistance payments pursuant to section 162 of the Housing and Community Development Act of 1987); and (6) the Section 8 Housing Assistance Program for the Disposition of HUD-Owned Projects (insofar as it involves substantial rehabilitation), 24 CFR part 886.

Before 1981, owners could rent up to 10 percent (20 percent in the Set-Aside Program for Rural Rental Housing Projects) of assisted units to ineligible families. Moreover, before 1984, the Department's regulations did not require a reduction in assisted units under the contract until rental to ineligibles exceeded 10 percent (20 percent in the Set-Aside Program for Rural Rental Housing Projects).

Section 325(l) of the Housing and Community Development Amendments of 1981 amended section 8(b)(2) of the U.S. Housing Act of 1937 by adding the following provision:

> Each contract to make assistance payments for newly constructed or substantially rehabilitated housing assisted under this section entered into after the date of enactment of the Housing and Community Development Amendments of 1981 shall provide that during the term of the contract the owner shall make available for occupancy by families which are eligible for assistance under this section, at the time of their initial occupancy, the number of units for which assistance is committed under the contract.

As a result of the Housing and Community Development Amendments of 1981, the Department implemented the existing regulations governing section 8 substantial rehabilitation or new construction which require that owners make available all assisted units for eligible families for Housing Assistance Payment (HAP) Contracts entered into pursuant to an Agreement to enter into a HAP Contract (AHAP) executed on or after October 1, 1981. The existing regulations, however, exempt owners who entered into an AHAP prior to October 1, 1981, from the statutory requirement that owners make all assisted units available for leasing by eligible families.

The Department believes that the purpose of section 555 of NAHA was to remove the exemption for owners who entered into an AHAP prior to October 1, 1981. Accordingly, this change would require that owners make available for eligible families all vacant units which are assisted with a HAP Contract, regardless of when the Owner entered into the AHAP. The Department wants to emphasize that this change would only apply to future vacancies. Under this rule, an owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time, would continue to lease the unit to that family. However, when the ineligible family vacates the unit, this rule would require that the owner make the unit available for occupancy by an eligible family.

Another important aspect of this rule is that it only applies to those units in newly constructed and substantially rehabilitated projects with a contract for assistance. Some newly constructed or substantially rehabilitated projects have unassisted units and assisted units. (These projects are often referred to as partially assisted projects.) This rule would not apply to those unassisted units.

The Section 8 Housing Assistance Program for the Disposition of HUD-owned Projects (24 CFR part 886, subpart C) involves existing housing in addition to substantially rehabilitated housing. The Additional Assistance Program for Projects with HUD-Insured and HUD-Held Mortgages (24 CFR part 886, subpart A) involves only existing housing. Under both subparts, the assistance is project based.

In implementing the existing regulations, the Department previously determined administratively that project-based assistance should be treated similarly to new construction and substantial rehabilitation for the purposes of this rule. As such, any contracts entered into after October 3, 1984 (the effective date of the current regulations) already are subject to the requirement that Owners make available all assisted units for eligible families. Since application of this proposed rule to an owner of existing housing is not mandated by section 555 of NAHA, this rule would not affect the obligation of a section 8 project owner of existing housing assisted under part 886 who executed a Contract before October 3, 1984.

Although this proposed rule does not change the section 202 program regulations, the Department is soliciting public comment on the section 202 elderly housing program. The changes proposed in this rule are consistent with the current regulations for the section 202 handicapped housing program, and so no changes are necessary for that program. However, when the Department publishes the management regulations for elderly housing projects as a final rule in the near future (the proposed rule was published on December 9, 1987 at 52 FR 46614), part 885 will contain a provision which is substantially similar to §§ 880.504 and 881.504 as those sections exist today. Because the final rule for this proposed rule will add the proposed changes to the elderly housing management regulations at that time, the Department believes that it is appropriate to solicit public comment at this time.

Finally, it is the general practice of the Department to provide a 60-day public comment period on all proposed rules. However, because of the statutory 180-day time limit for the production of

a proposed and final rule, the Department is shortening its usual 60-day public comment period to 30 days.

Other Matters

A. Regulatory Impact

This rule does not constitute a "major rule" as that term is defined in section 1(b) of the Executive Order 12291 on Federal Regulations issued by the President on February 17, 1981. An analysis of the rule indicates that it does not: (1) Have an annual effect on the economy of $100 million or more; (2) cause a major increase in costs or prices for consumers, individual industries, federal, state, or local government agencies, or geographic regions; or (3) have a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

B. Environmental Impact

A Finding of No Significant Impact with respect to the environment has been made in accordance with HUD regulations at 24 CFR part 50, which implement section 102(2)(C) of the National Environmental Policy Act of 1969. The finding is available for public inspection during regular business hours in the Office of General Counsel, the Rules Docket Clerk, room 10276, 451 Seventh Street, SW., Washington, DC 20410.

C. Executive Order 12612, Federalism

The General Counsel, as the Designated Official under section 6(a) of Executive Order 12612, Federalism, has determined that the policies contained in this rule will not have substantial direct effects on states or their political subdivisions, or the relationship between the Federal Government and the states, or on the distribution of power and responsibilities among the various levels of government. Specifically, the rule is directed to owners of multifamily housing projects, and will not impinge upon the relationship between the Federal Government and State and local governments. As a result, the rule is not subject to review under the order.

D. Executive Order 12606, the Family

The General Counsel, as the Designated Official under Executive Order 12606, The Family, has determined that this rule does not have potential for significant impact on family formation, maintenance, and general well-being, and, thus, is not subject to review under the order. No significant change in existing HUD policies or programs will result from promulgation of this rule, as those policies and programs relate to family concerns.

E. Regulatory Flexibility Act

The Secretary, in accordance with the Regulatory Flexibility Act (5 U.S.C. 605(b)) has reviewed and approved this rule, and in so doing certifies that this rule will not have a significant economic impact on a substantial number of small entities. This rule reflects a statutory requirement which applies to all section 8 newly constructed or substantially rehabilitated housing without regard to the size of entities involved.

F. Regulatory Agenda

This proposed rule was listed as sequence number 1442 in the Department's Semiannual Agenda of Regulations published on April 26, 1993 (58 FR 24382, 24409) in accordance with Executive Order 12291 and the Regulatory Flexibility Act.

G. The Catalog of Federal Domestic Assistance program number(s) are 14.156.

List of Subjects

24 CFR Part 880

Grant programs—housing and community development, Rent subsidies, Reporting and recordkeeping requirements.

24 CFR Part 881

Grant programs—housing and community development, Rent subsidies, Reporting and recordkeeping requirements.

24 CFR Part 883

Grant programs—housing and community development, Rent subsidies, Reporting and recordkeeping requirements.

CFR Part 884

Grant programs—housing and community development, Rent subsidies, Reporting and recordkeeping requirements, Rural areas.

24 CFR Part 886

Grant programs—housing and community development, Lead poisoning, Rent subsidies, Reporting and recordkeeping requirements.

Accordingly, 24 CFR parts 880, 881, 883, 884, and 886 would be amended as follows:

PART 880—SECTION 8 HOUSING ASSISTANCE PAYMENTS PROGRAM FOR NEW CONSTRUCTION

1. The authority citation for 24 CFR part 880 would be revised to read as follows:

Authority: 42 U.S.C. 1437a, 1437c, 1437f, and 1437f note; 42 U.S.C. 3535(d).

2. Section 880.504(d) would be revised to read as follows:

§ 880.504 Leasing to eligible families.

* * * * *

(d) *Applicability.* In accordance with section 555 of the Cranston-Gonzalez National Affordable Housing Act of 1990, paragraphs (a) and (b) of this section apply to all Contracts. An owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time shall continue to lease the unit to that family. However, the owner must make the unit available for occupancy by an eligible family when the ineligible family vacates the unit.

Part 881—SECTION 8 HOUSING ASSISTANCE PAYMENTS PROGRAM FOR SUBSTANTIAL REHABILITATION

3. The authority citation for 24 CFR part 881 would be revised to read as follows:

Authority: 42 U.S.C. 1437a, 1437c, 1437f, and 1437f note; 42 U.S.C. 3535(d).

4. Section 881.504(d) would be revised to read as follows:

§ 881.504 Leasing to eligible families.

* * * * *

(d) *Applicability.* In accordance with section 555 of the Cranston-Gonzales National Affordable Housing Act of 1990, paragraphs (a) and (b) apply to all contracts. An owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time shall continue to lease the unit to that family. However, the owner must make the unit available for occupancy by an eligible family when the ineligible family vacates the unit.

PART 883—SECTION 8 HOUSING ASSISTANCE PAYMENTS PROGRAM—STATE HOUSING AGENCIES

5. The authority citation for 24 CFR part 883 would be revised to read as follows:

Authority: 42 U.S.C. 1437a, 1437c, 1437f and 1437f note; 42 U.S.C. 3535(d).

6. Section 883.605(d) would be revised to read as follows:

§ 883.605 Leasing to eligible families.

* * * * *

(d) *Applicability.* In accordance with section 555 of the Cranston-Gonzalez National Affordable Housing Act of 1990, paragraphs (a) and (b) apply to all contracts. An owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time shall continue to lease the unit to that family. However, the owner must make the unit available for occupancy by an eligible family when the ineligible family vacates the unit.

PART 884—SECTION 8 HOUSING ASSISTANCE PAYMENTS PROGRAM—NEW CONSTRUCTION SET-ASIDE FOR SECTION 515 RURAL RENTAL HOUSING PROJECTS

7. The authority citation for 24 CFR part 884 would be revised to read as follows:

Authority: 42 U.S.C. 1437a, 1437c, 1437f, and 1437f note; 42 U.S.C. 3535(d).

8. Section 884.223(d) would be revised to read as follows:

§ 884.223 Leasing to eligible families.

* * * * *

(d) *Applicability.* In accordance with section 555 of the Cranston-Gonzalez National Affordable Housing Act of 1990, paragraph (a) and (b) apply to all contracts. An owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time shall continue to lease the unit to that family. However, the owner must make the unit available for occupancy by an eligible family when the ineligible family vacates the unit.

PART 886—SECTION 8 HOUSING ASSISTANCE PAYMENTS PROGRAM—SPECIAL ALLOCATIONS

9. The authority citation for 24 CFR part 886 would be revised to read as follows:

Authority: 42 U.S.C. 1437a, 1437c, 1437f, and 1437f note; 42 U.S.C. 3535(d).

10. Section 886.329(d) would be revised to read as follows:

§ 886.329 Leasing to eligible families.

* * * * *

(d) *Applicability.* In accordance with section 555 of the Cranston-Gonzalez National Affordable Housing Act of 1990, paragraphs (a) and (b) of this section apply to all contracts involving substantial rehabilitation. These paragraphs apply to all other Contracts executed on or after October 3, 1984. An owner who had leased an assisted unit to an ineligible family consistent with the regulations in effect at the time shall continue to lease the unit to that family. However, the owner must make the unit available for occupancy by an eligible family when the ineligible family vacates the unit.

Dated: June 22, 1993.

Nicolas P. Retsinas,

Assistant Secretary for Housing-Federal Housing Commissioner.

[FR Doc. 93-15491 Filed 6-30-93; 8:45 am]

BILLING CODE 4210-27-M

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 31

[EE-9-92]

RIN 1545-AR07

Supplemental Annuity Tax—Railroad Retirement; Correction

AGENCY: Internal Revenue Service, Treasury.

ACTION: Correction to notice of proposed rulemaking.

SUMMARY: This document contains corrections to the notice of proposed rulemaking (EE-9-92), which was published in the **Federal Register** for Thursday, May 13, 1993 (58 FR 28371). The proposed regulations relate to supplemental annuity tax under the Railroad Retirement Tax Act.

FOR FURTHER INFORMATION CONTACT: Karin Loverud, (202) 622-6060 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

The notice of proposed rulemaking that is the subject of these corrections contain proposed amendments to the Employment Tax Regulations (26 CFR part 31) under sections 3211(b) and 3221(c) of the Internal Revenue Code.

Need for Correction

As published, the proposed regulations contain errors which may prove to be misleading and are in need of clarification.

Correction of Publication

Accordingly, the publication of the proposed regulations (EE-9-92), which was the subject of FR Doc. 93-10746, is corrected as follows:

1. On page 28374, column 1, § 31.3221-3(d)(3), the language in the last 3 lines that read "However, for calendar year 1993, the election is made on the return filed for 1993." is removed.

2. On page 28374, column 1, § 31.3221-3(e), is corrected to read as follows:

§ 31.3221-3 Supplemental tax

* * * * *

(e) *Effective dates.* This § 31.3221-3 is generally effective for calendar years beginning after December 31, 1992. Taxpayers may apply the rules in paragraphs (a), (b), and (c) of this section before that date. Paragraph (d) is effective for calendar years beginning after December 31, 1993.

Cynthia E. Grigsby,

Alternate Federal Register Liaison Officer, Assistant Chief Counsel (Corporate).

[FR Doc. 93-15032 Filed 6-30-93; 8:45 am]

BILLING CODE 4830-01-U

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26 CFR Part 31

[EE-63-92]

RIN 1545-AR08

Update of Railroad Retirement Tax Act Regulations; Correction

AGENCY: Internal Revenue Service, Treasury.

ACTION: Correction to notice of proposed rulemaking.

SUMMARY: This document contains corrections to the notice of proposed rulemaking (EE-63-92), which was published in the **Federal Register** for Thursday, May 13, 1993 (58 FR 28366). The proposed regulations relate to the Railroad Retirement Tax Act.

FOR FURTHER INFORMATION CONTACT: Jean M. Whalen, (202) 622-6040 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

The notice of proposed rulemaking that is the subject of these corrections contain proposed amendments to the Employment Tax Regulations (26 CFR part 31) under sections 3201 through 3231 of the Internal Revenue Code.

Need for Correction

As published, the proposed regulations contain errors which may prove to be misleading and are in need of clarification.

Correction of Publication

Accordingly, the publication of the proposed regulations (EE-63-92), which was the subject of FR Doc. 93-10744, is corrected as follows:

1. On page 28367, column 3, in the preamble under the heading "Background", third full paragraph, fourth line from the bottom of the

paragraph, the language "organization is below a certain statutory" is corrected to read "organization employer is below a certain statutory".

2. On page 28369, column 1, the example in § 31.3201–2(b)(2), top of column, is corrected to read as follows:

§ 31.3201–2 Rates and computation of employee tax.

* * * * *

(b) * * *

(2) * * *

Example. In 1990, employee *A* received $1,000 as remuneration for services performed for employer *R* in 1989. The employee tax is payable at the rate of 12.55 percent (7.65 percent plus 4.90 percent) in effect for 1990 (the year the compensation was received), and not the 12.41 percent rate (7.51 percent plus 4.90 percent) in effect for 1989 (the year the services were performed).

* * * * *

3. On page 28370, column 1, § 31.3221–2(a)(3), last line of that paragraph, the reference "§ 31.3211–3." is corrected to read "§ 31.3221–3.".

4. On page 28370, bottom of column 1 and the top of column 2, the example in § 31.3221–2(b)(2), is corrected to read as follows:

§ 31.3221–2 Rates and computation of employer tax.

* * * * *

(b) * * *

(2) * * *

Example. In 1990, *R's* employee *A* received $1,000 as remuneration for services performed for *R* in 1989. The employer tax is payable at the rate of 23.75 percent (7.65 percent plus 16.10 percent) in effect for 1990 (the year the compensation was received) and not the 23.61 percent rate (7.51 percent plus 16.10 percent) in effect for 1989 (the year the services were performed).

* * * * *

5. On page 38371, column 1, the section heading, "§ 31.3231(e)–(2) Contribution base." is corrected to read "§ 31.3231(e)–2 Contribution base.".

Cynthia E. Grigsby,

Alternate Federal Register Liaison Officer, Assistant Chief Counsel (Corporate).

[FR Doc. 93–15033 Filed 6–30–93; 8:45 am]

BILLING CODE 4830–01–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 88

[AMS–FRL–4674–9]

Clean Fuel Fleet Emission Standards, Conversions, and General Provisions and Amended Heavy-Duty Averaging, Banking, and Trading Credit Accounting Regulations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; clarification of comment period and opportunity to request public hearing.

SUMMARY: This action transmits a clarification to the preamble of the Notice of Proposed Rulemaking (NPRM) published in the **Federal Register** at (58 FR 32474) on June 10, 1993. Although a public hearing is scheduled to be held on July 15, 1993 on other provisions in that NPRM, EPA is not at this time planning to hold a public hearing for the proposed Averaging, Banking, and Trading (ABT) provisions in that document.

As such, the written comments on the proposed ABT provisions must be submitted on or before August 2, 1993, and not on or before 30 days from the conclusion of the public hearing on the other provisions in that NPRM.

However, at this time EPA is providing interested persons with the opportunity to request a public hearing on the proposed ABT provisions. If such a hearing is requested, it will be held on July 15, 1993 at the address noted below, and the comment period will be extended as noted below.

DATES: All requests for a hearing on the ABT provisions should be made to the contact below on or before July 8, 1993. If a hearing on the ABT provisions is requested, it will be held on July 15, 1993 at the address noted below.

Written comments on the proposed ABT provisions must be submitted on or before August 2, 1993, if no hearing is held on these provisions, or on or before 30 days from the conclusion of the hearing, if a hearing is held on these provisions.

ADDRESSES: As indicated in the original notice, interested parties may submit written comments (in duplicate if possible) to Public Docket No. A–92–30 at the following address: U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. The docket is available for public inspection from 8:30 a.m. until 12 noon and from 1:30 p.m. until 3:30 p.m. Monday through Friday. A reasonable fee may be charged for copying docket materials.

If a public hearing is requested, it will be held in conjunction with the hearing on the other provisions of the NPRM at Domino's Farms, 24 Frank Lloyd Wright Drive, Ann Arbor, MI 48105 (Telephone: (313) 930–4258) in the Ulrich Room at 9:00 a.m. on July 15, 1993. The contact listed below may be contacted to determine whether a public hearing has been requested and will be held on the ABT provisions.

FOR FURTHER INFORMATION CONTACT: Ms. Paulina Chen, U.S. EPA (6405J), Manufacturers Operations Division, 401 M Street, SW., Washington, DC, 20460, Telephone: (202) 233–9249.

Dated: June 28, 1993.

Carol M. Browner,

Administrator.

[FR Doc. 93–15692 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 93–171, RM–8257]

Radio Broadcasting Services; Lindsborg and Sterling, KS

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document requests comments on a petition filed by E. Jerry Davies and Diane Davies d/b/a JD Communications proposing the substitution of Channel 238C3 for Channel 240A at Lindsborg, Kansas, and modification of the license for Station KQNS–FM to specify operation on Channel 238C3. The coordinates for Channel 238C3 are 38–40–00 and 97–41–30. To accommodate Channel 238C3 at Lindsborg we shall propose substituting Channel 234A for vacant Channel 239A at Sterling, Kansas, at coordinates 38–12–42 and 98–12–12. If no applications for Channel 239A at Sterling are filed during the comment period, we shall delete the channel and no substitute allotment will be made to Sterling. We shall propose to modify the license for Station KQNS–FM in accordance with § 1.420(g) of the Commission's Rules and will not accept competing expressions of interest for the use of the channel or require petitioner to demonstrate the availability of an additional equivalent class channel for use by such parties.

DATES Comments must be filed on or before August 16, 1993, and reply comments on or before August 31, 1993.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, as follows: E. Jerry Davies and Diane Davies, d/b/a JD Communications, P.O. Box 1069, McPherson, Kansas 67460.

FOR FURTHER INFORMATION CONTACT: Kathleen Scheurle, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rule Making, MM Docket No. 93–172, adopted June 9, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center (room 239), 1991 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 2100 M Street, NW., suite 140, Washington, DC 20036, (202) 857–3800.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contact.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15534 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

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47 CFR Part 73

[MM Docket No. 93–170, RM–8250]

Radio Broadcasting Services; Bemidji, MN

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document requests comments on a petition filed by Thomas J. Lijewski proposing the allotment of Channel 238C1 to Bemidji, Minnesota, as that community's third FM broadcast service. Channel 238C1 can be allotted to Bemidji without a site restriction at coordinates 47–28–49 and 94–52–49. Canadian concurrence will be requested for this allotment.

DATES: Comments must be filed on or before August 16, 1993, and reply comments on or before August 31, 1993.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner's counsel, as follows: Timothy E. Welch, Dean George Hill & Welch, 1330 New Hampshire Avenue, NW., suite 113, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Kathleen Scheuerle, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rule Making, MM Docket No. 93–170 adopted June 8, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 2100 M Street, NW., suite 140, Washington, DC 20036, (202) 857–3800.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contact.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15533 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

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47 CFR Part 73

[MM Docket No. 93–174, RM–8263]

Radio Broadcasting Services; Owensville and Versailles, MO

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document requests comments on a petition filed by Twin Lakes Communications, Inc., proposing the substitution of Channel 236C3 for Channel 236A at Versailles, Missouri, and modification of the license for Station KLGS (FM) to specify operation on the higher class channel. The coordinates for Channel 236C3 at Versailles are 38–23–27 and 92–38–06. We shall propose to modify the license for Station KLGS (FM) in accordance with § 1.420(g) of the Commission's Rules and will not accept competing expressions of interest for the use of the channel or require petitioner to demonstrate the availability of an additional equivalent class channel for use by such parties. To accommodate the upgrade at Versailles, we shall propose to substitute Channel 237A for Channel 237C2 at Owensville, Missouri, at coordinates 38–15–22 and 91–32–04.

DATES: Comments must be filed on or before August 16, 1993, and reply comments on or before August 31, 1993.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner's counsel, as follows: Frank R. Jazzo, Fletcher, Heald & Hildreth, 1300 North 17th Street, 11th Floor, Rosslyn, Virginia 22209.

FOR FURTHER INFORMATION CONTACT: Kathleen Scheuerle, Mass Media Bureau, (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rule Making, MM Docket No. 93–174, adopted June 10, 1993, and released June 25, 1993. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center (room 239), 1919 M Street, NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 2100 M Street, NW., suite 140, Washington, DC 20036, (202) 857–3800.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed

Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contact.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Michael C. Ruger,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 93–15530 Filed 6–30–93; 8:45 am]

BILLING CODE 6712-01-M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 543

[Docket No. 93–46; Notice 1]

RIN 2127–AE66

Motor Vehicle Theft Prevention; Exemption From Vehicle Theft Prevention Standard

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to amend the agency regulation on exempting high theft lines to conform to the amendments made by the "Anti Car Theft Act of 1992" to Title VI ("Theft Prevention") of the Motor Vehicle Information and Cost Savings Act. As amended, Title VI limits the number of high theft motor vehicle lines that may be exempted from the parts marking requirements of the Federal Motor Vehicle Theft Prevention Standard. For each model year through model year 1996, a manufacturer may petition for exemptions for up to two additional lines of its passenger motor vehicles. For the four year period beginning with model year 1997 and ending with model year 2000, a manufacturer may petition for an exemption for only one additional line of its passenger motor vehicles for each year.

DATES: Comments must be received on or before August 16, 1993.

ADDRESSES: All comments should refer to the docket number and notice number cited in the heading of this notice and be submitted, preferably in 10 copies, to: Docket Section, room 5109, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. Docket hours are from 9:30 a.m. to 4 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Ms. Barbara A. Gray, Office of Market Incentives, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Ms. Gray's telephone number is (202) 366–1740.

SUPPLEMENTARY INFORMATION:

Motor Vehicle Theft Law Enforcement Act of 1984

The Motor Vehicle Theft Law Enforcement Act of 1984 (Pub. L. 98–547) (Theft Act), added Title VI to the Motor Vehicle Information and Cost Savings Act (Cost Savings Act). Pursuant to Title VI, NHTSA promulgated 49 CFR part 541, titled "Federal Motor Vehicle Theft Prevention Standard." Part 541 establishes performance requirements for inscribing or affixing identification numbers onto certain major original equipment and replacement parts of high theft lines of passenger motor vehicles.

Section 605 of Title VI permits manufacturers to petition NHTSA to exempt high theft vehicle lines from the Theft Prevention Standard. To be exempted, a high theft line must satisfy two conditions. First, a line must be equipped with an antitheft device as standard equipment on the entire line for which its manufacturer seeks an exemption. Second, NHTSA must determine that such antitheft device is likely to be as effective as parts marking in reducing and deterring motor vehicle theft. As originally enacted, section 605 allowed the agency to grant an exemption for not more than two lines of any manufacturer for the initial model year (model year 1987) to which the vehicle theft prevention standard applies, and two additional lines of any manufacturer for each subsequent model year.

Regulations governing the granting of exemptions are set forth in 49 CFR part 543, "Exemption from Vehicle Theft Prevention Standard." Part 543 sets out procedures for manufacturers to follow in preparing and submitting petitions for exemption from the parts marking requirements of part 541. It also sets forth procedures for NHTSA to follow in processing those petitions and determining whether they should be granted.

Anti Car Theft Act of 1992

The "Anti Car Theft Act of 1992" (ACTA), which became law on October 25, 1992, amended Title VI of the Cost Savings Act. Title VI was amended to redefine "passenger motor vehicle" to include "any multipurpose passenger vehicle and light-duty truck that is rated at 6,000 pounds gross vehicle weight or less." (See section 601(1) of Title VI.) Before the amendment of Title VI, "passenger motor vehicle" was defined for the purposes of Title VI to include passenger cars only. The effect of the redefinition is that certain light-duty truck lines and multipurpose passenger vehicle lines may be determined to be likely high theft vehicles, and thus, may be subject to the parts marking requirements of the Federal Motor Vehicle Theft Prevention Standard (49 CFR part 541). If the lines are designated as high theft lines, manufacturers of certain light-duty trucks and multipurpose passenger vehicle lines may, under the procedures in part 543, petition for exemption of these lines from the parts marking requirements of part 541.

The Title VI amendment giving rise to this proposal restricts the number of exemptions from parts marking that may be granted to any manufacturer of high theft passenger motor vehicle lines. As a result of the amendments to section 605(a)(2) of Title VI, the agency may continue to grant exemptions for two high theft lines per manufacturer per year, from the present through MY 1996.

> For each subsequent model year through model year 1996, the Secretary may grant exemption for not more than 2 additional lines of any manufacturer * * *

However, for the next four years, Title VI states that:

> For MY 1997 through MY 2000, [NHTSA] may grant such an exemption for not more than 1 additional line of any manufacturer * * *

Amended Title VI also states that, after MY 2000, the granting of any further exemptions would be contingent on a determination by the U.S. Attorney General whether the antitheft devices are an effective substitute for parts marking in substantially inhibiting vehicle theft. If the Attorney General determines that the devices are not effective, no more exemptions from the parts marking requirements could be issued. If the Attorney General determines that the devices are effective, the determination is to be accompanied with a recommendation as to the number of exemptions which may be granted from the parts marking requirements. The Attorney General's determination must be made by December 1999. See section 602(f)(5) of Title VI.

In response to the amendments to section 605, NHTSA proposes to amend part 543 to conform it to the new statutory restrictions on the number of exemptions from the parts marking requirements of part 541. NHTSA proposes to amend part 543 to state the number of vehicle lines for which a manufacturer may petition for exemption for each model year through MY 2000. More specifically, NHTSA proposes that for each model year through model year 1996, a manufacturer may petition for exemptions for up to two additional lines of its passenger motor vehicles.

For each model year from model year 1997 through model year 2000, the agency proposes that a manufacturer may petition for exemptions for only one additional line of its passenger motor vehicles. NHTSA recognizes that section 605 is less clear about the number of exemptions that may be granted for model years 1997 through 2000 than for the years preceding that period. While the sentence in the statute regarding exemptions for model years through model year 1996 explicitly states that two lines may be exempted "(f)or each subsequent model year," the sentence regarding the model years 1996 through 2000 period does not contain any similar language.

For guidance in resolving this ambiguity, the agency consulted the legislative history of the "Anti Car Theft Act of 1992." The following comments from Representative John Dingell, Chairman of the House Committee on Energy and Commerce expressly address the issue of how many exemptions from parts marking each manufacturer may petition for model years 1997 through 2000:

> * * * the legislation continues the present exemptions under Section 605(a) for antitheft devices and a manufacturer may add two care lines annually for 3 model years and then one additional car line *annually* for 4 more model years. (Emphasis added.) (See Congressional Record—House of Representatives October 5, 1992, at page H 1180.)

This legislative history is strong evidence that Congress intended to permit each manufacturer to petition NHTSA to grant an exemption for only one additional line of its passenger motor vehicles from parts marking for each of model years 1997 through 2000. Accordingly, in this notice, NHTSA proposes to amend 49 CFR part 543 to permit a manufacturer to petition NHTSA to grant an exemption for only one additional line of its passenger motor vehicles for each of model years 1997 through 2000.

NHTSA is not proposing to address exemptions for model years after MY 2000, since, as discussed above, any such exemptions are contingent upon the Attorney General's determination to be made in 1999.

Finally, NHTSA proposes that a minor amendment be made to reflect the fact that petitions could be submitted under part 543 for light-duty trucks and multipurpose passenger vehicles, as well as passenger cars.

This proposed rule does not have any retroactive effect, and it does not preempt any State law. Section 613 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2020), provides that judicial review of this rule may be obtained pursuant to section 504 of the Cost Savings Act (15 U.S.C. 2004). The Cost Savings Act does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

Regulatory Impacts

1. Executive Order 12291

NHTSA has analyzed this proposal and determined that it is neither "major" within the meaning of Executive Order 12291 nor "significant" within the meaning of the Department of Transportation regulatory policies and procedures. This proposal simply sets forth amendments conforming part 543 to the amendments to Title VI. The proposal itself would have no impacts on the manufacturers of passenger motor vehicles.

Accordingly, NHTSA does not believe that this proposed rulemaking would affect the impacts described in the regulatory evaluation prepared for the proposal leading to the establishment of part 541. Therefore, a separate regulatory evaluation has not been prepared for this proposed rule. Interested persons may wish to examine the regulatory evaluation for part 541 as originally proposed. Copies of that evaluation have been placed in Docket No. T–84–01; Notice 4, and may be obtained by writing to: National Highway Traffic Safety Administration, Docket Section, room 5109, 400 Seventh Street, SW., Washington, DC 20590.

2. Small Business Impacts

The agency has also considered the effects of this rulemaking action under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). I certify that this proposed rule would not, if promulgated as a final rule, have a significant economic impact on a substantial number of small entities. As already noted, this proposal simply sets forth amendments conforming Part 543 to the amendments to Title VI. The proposal itself would have no impact on the manufacturers of passenger motor vehicles or on small organizations or governmental units that purchase passenger motor vehicles.

3. Environmental Impacts

In accordance with the National Environmental Policy Act of 1969, the agency has considered the environmental impacts of this proposed rule and determined that, if adopted as a final rule, it would not have a significant impact on the quality of the human environment.

4. Paperwork Reduction Act

The procedures in this proposed rule for manufacturers to submit petitions for exemption from parts marking to NHTSA are considered to be information collection requirements, as that term is defined by the Office of Management and Budget (OMB) in 5 CFR part 1320. The information collection requirements for part 543 have been submitted to and approved by the OMB, pursuant to the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). This collection of information has been assigned OMB Control No. 2127–0542 ("Petitions for exemption from the vehicle theft prevention standard") and has been approved for use through July 31, 1995.

5. Federalism

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that the proposed rulemaking does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Public Comments

Interested persons are invited to submit comments on the proposal. It is requested, but not required that 10 copies be submitted.

All comments must not exceed 15 pages in length. (See 49 CFR 553.21.) Necessary attachments may be appended to these submissions without regard to the 15-page limit. This limitation is intended to encourage commenters to detail their primary arguments in a concise fashion.

If a commenter wishes to submit certain information under a claim of confidentiality, three copies of the complete submission, including purportedly confidential business information, should be submitted to the Chief Counsel, NHTSA, at the street address given above, and seven copies from which the purportedly confidential

information has been deleted should be submitted to the Docket Section. A request for confidentiality should be accompanied by a cover letter setting forth the information specified in the agency's confidential business information regulation. (See 49 CFR part 512.)

All comments received before the close of business on the comment closing date indicated above for the proposal will be considered, and will be available for examination in the docket at the above address both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Comments received too late for consideration in regard to the final rule will be considered as suggestions for further rulemaking action. Comments on the proposal will be available for inspection in the docket. NHTSA will continue to file relevant information as it becomes available in the docket after the closing date, and it is recommended that interested persons continue to examine the docket for new materials.

Those persons desiring to be notified upon receipt of their comments in the rules docket should enclose a self-addressed stamped postcard in the envelope with their comments. Upon receiving the comments, the docket supervisor will return the postcard by mail.

List of Subjects in 49 CFR Part 543

Administrative practice and procedure, National Highway Traffic Safety Administration, reporting requirements.

In consideration of the foregoing, it is proposed that 49 CFR part 543 be amended as follows:

PART 543—[AMENDED]

1. The authority citation for part 543 would continue to read as follows:

Authority: 15 U.S.C. 2025; delegation of authority at 49 CFR 1.50.

2. Section 543.5(a) would be revised to read as follows:

§ 543.5 Petition; General requirements.

(a) For each model year through model year 1996, a manufacturer may petition NHTSA to grant exemptions for up to two additional lines of its passenger motor vehicles from the requirements of Part 541. For each of model years 1997 through 2000, a manufacturer may petition NHTSA to grant an exemption for one additional line of its passenger motor vehicles from the requirements of part 541.

* * * * *

3. Section 543.6(a) introductory text is republished for the convenience of the reader and paragraph (a)(1) would be revised to read as follows:

§ 543.6 Petition; specific content requirements.

(a) Each petition for exemption filed under this part must include:

(1) A statement that an antitheft device will be installed as standard equipment on all vehicles in the line for which an exemption is sought;

* * * * *

Issued on: June 28, 1993.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 93–15536 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–59–M

Notices

Federal Register
Vol. 58, No. 125
Thursday, July 1, 1993

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Forms Under Review by Office of Management and Budget

June 25, 1993.

The Department of Agriculture has submitted to OMB for review the following proposal for the collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35) since the last list was published. This list is grouped into new proposals, revisions, extension, or reinstatements. Each entry contains the following information:

(1) Agency proposing the information collection; (2) Title of the information collection; (3) Form number(s), if applicable; (4) How often the information is requested; (5) Who will be required or asked to report; (6) An estimate of the number of responses; (7) An estimate of the total number of hours needed to provide the information; (8) Name and telephone number of the agency contact person.

Questions about the items in the listing should be directed to the agency person named at the end of each entry. Copies of the proposed forms and supporting documents may be obtained from: Department Clearance Officer, USDA, OIRM, room 404–W Admin. Bldg., Washington, DC 20250, (202) 690–2118.

Reinstatement

- Forest Service
- Forest Industry Survey of California and Oregon
- One time only
- Businesses or other for-profit; small businesses or organizations; 500 responses; 250 hours
- George R. Sampson (907) 474–3303

Donald E. Hulcher,

Deputy Department Clearance Officer.

[FR Doc. 93–15477 Filed 6–30–93; 8:45 am]

BILLING CODE 3410-01-M

Office of the Secretary

South Carolina Hugo Incentives Program; Determination of Primary Purpose of Program Payments for Consideration as Excludable From Income Under Section 126 of the Internal Revenue Code of 1954

AGENCY: Office of the Secretary, USDA.

ACTION: Notice of determination.

SUMMARY: The Secretary of Agriculture has determined that all State cost-share payments made to individuals by the State of South Carolina under the South Carolina Hugo Incentives Program are made primarily for the purpose of restoring the environment, improving forests, and providing wildlife habitat in South Carolina. This determination is made pursuant to section 126 of the Internal Revenue Code and subject to a subsequent determination by the Secretary of the Treasury, will permit recipients of these cost-share payments to exclude them from gross income for Federal income tax purposes to the extent allowed by the Internal Revenue Service.

FOR FURTHER INFORMATION CONTACT: F.A. Dorrell, Director, Cooperative Forestry Staff, Forest Service, USDA, P.O. Box 96090, Washington, DC 20090–6090, (202) 205–1389.

SUPPLEMENTARY INFORMATION: Section 126 of the Internal Revenue Code of 1954, as amended by the Revenue Act of 1978, and the Technical Corrections Act of 1979, 26 U.S.C. 126, provides that certain payments made to persons under State cost-share conservation programs may be excluded from the recipient's gross income for Federal income tax purposes if the Secretary of Agriculture determines that payments are made "primarily for the purpose of soil and water conservation, protecting or restoring the environment, improving forests, or providing a habitat for wildlife." To make a "primary purpose" determination, the Secretary evaluates a cost-share conservation program based on criteria set forth at 7 CFR part 14. Following a determination by the Secretary of Agriculture, the Secretary of the Treasury must then determine that payments made under these conservation programs do not substantially increase the annual income derived from the property benefited by the payments.

The South Carolina Hugo Incentives Program is a cost-share conservation program operated under the authority of South Carolina Code 48–23–90. It is funded through grants from the Forest Service, U.S. Department of Agriculture, under the authority of section 3 of the Cooperative Forestry Assistance Act of 1978, as amended by the Food, Agriculture, Conservation, and Trade Act of 1990 (16 U.S.C. 1201). Authority for funding of the program is from Public Law 101–512, Department of the Interior and Related Agencies Appropriation Act of 1990. The program provides financial assistance to nonindustrial private landowners to reforest timber stands damaged by Hurricane Hugo, primarily for the purpose of restoring the environment, improving forests, enhancing growth of forest products, and providing wildlife habitat. The program is administered by the State Forester under the auspices of the South Carolina Forestry Commission.

Program objectives are achieved through the development and implementation of forest management plan approved by a Commission forester for an eligible landowner. To obtain approval, the plan must include forest management practices that ensure both forest productivity and environmental protection of the lands to be treated under the management plan. Program objectives are further achieved through the installation of silvicultural practices, approved by the State Forester, aimed at regenerating and restoring commercial timber stands significantly damaged by Hurricane Hugo. Approved practices must include site preparation, natural and artificial reforestation, and control of undesirable vegetation for reforestation purposes.

Having carefully examined the authorizing legislation, regulations, and operating procedures for the South Carolina Hugo Incentives Program using the criteria set forth in 7 CFR part 14, the Secretary of Agriculture has concluded that the cost-share payments for implementing approved reforestation practices under this program are made to eligible persons primarily for the purposes of protecting or restoring the environment, improving forests, and providing wildlife habitat.

A copy of the primary purpose determination as signed by the Assistant Secretary for Natural Resources and

Environment on June 14, 1993, is set out at the end of this notice.

Determination

As required by section 126(b) of the Internal Revenue Code of 1954, as amended, the authorizing legislation, regulations, and operating procedures regarding the South Carolina Hugo Incentives Program have been examined in accordance with the criteria set out in 7 CFR part 14. Based on this examination, I hereby determine that those cost-share payments made for planning and installing reforestation practices under this program are primarily for the purpose of protecting or restoring the environment, improving forests, and providing wildlife habitat. Subject to further determination by the Secretary of the Treasury, that payments made under these conservation programs do not substantially increase the annual income derived from the property benefited by these payments, this determination permits payment recipients to exclude from gross income, for Federal income tax purposes, all or part of the cost-share payments made under said program to the extent allowed by the Internal Revenue Service.

Dated: June 14, 1993.

James R. Lyons,

Assistant, Secretary for Natural Resources & Environment.

[FR Doc. 93–15503 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–11–M

Office of the Assistant Secretary for Food and Consumer Services

Development of the United States Plan of Action for Nutrition in Response to the International Conference on Nutrition (ICN); Opportunity To Provide Written Comments, Meeting

AGENCY: Office of the Assistant Secretary for Food and Consumer Services, USDA.

ACTION: Notice.

SUMMARY: The Department of Agriculture (USDA), the Department of Health and Human Services (DHHS), and the Agency for International Development (USAID) (a) announce the availability of the World Declaration and Plan of Action for Nutrition resulting from the International Conference on Nutrition; (b) announce a public meeting to solicit input for the development of the U.S. Plan of Action for Nutrition and (c) invite written public proposals and comments by September 7, 1993.

DATES: To be assured of consideration, written proposals for the U.S. Plan on Action for Nutrition should be postmarked no later than September 7, 1993. The public meeting will be held at the Department of Agriculture, 14th and Independence Ave., SW., Administration Bldg., room 107A, on August 4, 1993 from 9:30 am to 4 p.m.

ADDRESSES: Written proposals and comments on the U.S. Plan of Action for Nutrition should be sent to Frances Zorn, Food and Nutrition Service (USDA), room 206, 3101 Park Center Drive, Alexandria, VA 22302.

FOR FURTHER INFORMATION CONTACT: (1) For a copy of the ICN World Declaration and Plan of Action for Nutrition, write to Floyd Miles, Food and Nutrition Service (USDA), room 206, 3101 Park Center Drive, Alexandria, VA 22302 or phone (703) 305–2115. (2) For additional information regarding the U.S. Plan of Action for Nutrition contact Jill Randell, Food and Nutrition Service (USDA), room 206, 3101 Park Center Drive, Alexandria, VA 22302 or phone (703) 305–1112; Neil Gallagher, Office of International Cooperation and Development, Department of Agriculture, room 3005 South Building, 14th and Independence Ave., SW., Washington, DC 20250–4300; (202) 690–1817, Linda Meyers, Office of Disease Prevention and Health Promotion, U.S. Public Health Service, DHHS, 330 C Street, SW., room 2132 Switzer Bldg., Washington, DC 20201, (202) 205–9007; or Eunyong Chung, Office of Nutrition, USAID, SA#18, room 411, Washington, DC 20523–1808, (703) 875–4074.

SUPPLEMENTARY INFORMATION: The International Conference on Nutrition (ICN) was held in Rome, Italy, in December 1992. It was jointly sponsored by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO).

The World Declaration and Plan of Action for Nutrition were submitted to the ICN and their contents were discussed, revised and unanimously approved by delegates from 159 countries and the European Economic Community. Nongovernment organizations and private business groups also participated in the discussions. The nine subject areas identified in the approved Plan of Action were: (1) Incorporating nutritional objectives, considerations, and components into development policies and programs; (2) Improving household food security; (3) Protecting consumers through improved food quality and safety; (4) Preventing and managing infectious diseases; (5) Promoting breastfeeding; (6) Caring for the socio-economically deprived and nutritionally vulnerable; (7) Preventing and controlling specific micronutrient deficiencies; (8) Promoting appropriate diets and healthy lifestyles; and (9) Assessing, analyzing and monitoring nutritional situations. All governments have been asked to prepare or improve national plans of action and policies based on the principles and strategies in the World Declaration and Plan of Action for Nutrition by the end of 1994.

Public input, on topics such as programs, policies and research activities, is requested for consideration in developing the U.S. Plan of Action for Nutrition. All written proposals, comments, and/or oral remarks should note specifically which of the above topics are being addressed. This notice is not published pursuant to the Administrative Procedures Act.

Dated: June 25, 1993.

Ellen Haas,

Assistant Secretary for Food and Consumer Services, U.S. Department of Agriculture.

[FR Doc. 93–15494 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–30–M

Forest Service

Establishment of Skagit Purchase Unit

AGENCY: Forest Service, USDA.

ACTION: Notice of establishment of Skagit Purchase Unit.

SUMMARY: On May 21, 1993, the Secretary of Agriculture created the Skagit Purchase Unit. This purchase unit comprises 820 acres, more or less, within Skagit County, Washington. A copy of the Secretary's establishment document which includes the legal description of the lands within the purchase unit appears at the end of this notice.

EFFECTIVE DATE: The effective date of this purchase unit was May 21, 1993.

ADDRESSES: A copy of the map showing the purchase unit is on file and available for public inspection in the Office of the Chief of the Forest Service, Auditor's Building, 201 14th Street, SW., Washington, DC 20090–6090.

FOR FURTHER INFORMATION CONTACT: Ralph Bauman, Lands Staff, Forest Service, USDA, P.O. Box 96090, Washington, DC 20090–6090 (202) 205–1248.

Dated: June 22, 1993.

Jeff M. Sirmon,

Acting Chief.

Establishment of Skagit Purchase Unit, Skagit County, Washington

Pursuant to the Secretary of Agriculture's authority under section 17, Public Law 94–588 (90 Stat. 2949) a purchase unit is being established and is described as follows:

Skagit County, Washington Willamette Meridian

T. 35 N., R. 10 E.
Sec. 19: E½
Sec. 20: NW¼
Sec. 30: Those lands lying north of State Highway 20

The area described aggregate 820 acres, more or less, and is adjacent to the Mt. Baker National Forest boundary.

These lands are well suited for watershed protection and meet the requirements of the Act of March 1, 1911, as amended.

Dated: May 21, 1993.

Mike Espy,

Secretary of Agriculture.

[FR Doc. 93–15504 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–11–M

Establishment of Sur Sur Purchase Unit

AGENCY: Forest Service, USDA.

ACTION: Notice of establishment of Sur Sur Purchase Unit.

SUMMARY: On May 21, 1993, the Secretary of Agriculture created the Sur Sur Purchase Unit. This purchase unit comprises 1,714 acres, more or less, within Monterey and San Luis Obispo Counties, California. A copy of the Secretary's establishment document which includes the legal description of the lands within the purchase unit appears at the end of this notice.

EFFECTIVE DATE: The effective date of this purchase unit was May 21, 1993.

ADDRESSES: A copy of the map showing the purchase unit is on file and available for public inspection in the Office of the Chief of the Forest Service, Auditor's Building, 201 14th Street, SW., Washington, DC 20090–6090.

FOR FURTHER INFORMATION CONTACT: Ralph Bauman, Lands Staff, Forest Service, USDA, P.O. Box 96090, Washington, DC 20090–6090 (202) 205–1248.

Dated: June 22, 1993.

Jeff M. Sirmon,

Acting Chief.

Sur Sur Purchase Unit Monterey and San Luis Obispo Counties, California

Pursuant to the Secretary of Agriculture's authority under section 17, Public Law 94–588 (90 Stat. 2949) a purchase unit is being established and is described as follows:

Monterey County, California, Mount Diablo Base and Meridian

T.24S., R. 6E.
Section 32: SE¼NE¼, E½SE¼, SW¼SE¼
Section 33: W½SE¼, W½

San Luis Obispo County, California, Mount Diablo Base and Meridian

T.25S., R.6E.
Section 3: NW¼, N½SW¼, SE¼, S½NE¼
Section 4: N½, N½S½
Section 5: Lots 1 and 5
Section 9: Pt. W½ as described in official plat thereof as granted to Haake Lands by deed recorded April 7, 1976, Book 1890, page 218

The area described aggregate 1,714 acres, more or less, and are adjacent to the Los Padres National Forest, California.

These lands are well suited for watershed protection and meet the requirements of the Act of March 1, 1911, as amended.

Dated: May 21, 1993.

Mike Espy,

Secretary of Agriculture.

[FR Doc. 93–15505 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–11–M

Packers and Stockyards Administration

Southwind Horse Auction, Westminister, South Carolina; Correction

On June 3, 1993, a notice was published in the **Federal Register** (47 FR 32177) giving notice of the deposting for certain stockyards listing their facility number, name and location.

This notice is to correct the date of posting assigned to Southwind Horse Auction, Westminister, South Carolina.

SC–149—Southwind Horse Auction, Westminister, South Carolina, April 1, 1991.

Done at Washington, DC, this 25th day of June, 1993

Harold W. Davis, Director,

Livestock Marketing Division.

[FR Doc. 93–15475 Filed 6–30–93; 8:45 am]

BILLING CODE 3410–01–M

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[Docket 27–93]

Foreign-Trade Zone 138—Columbus, Ohio; Application for Expansion

An application has been submitted to the Foreign-Trade Zones Board (the Board) by the Rickenbacker Port Authority (RPA), grantee of FTZ 138, requesting authority to expand its zone in Franklin County, Ohio, adjacent to the Columbus Customs port of entry. The application was submitted pursuant to the provisions of the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR part 400). It was formally filed on June 24, 1993.

FTZ 138 was approved on March 13, 1987 (Board Order 351, 52 FR 9319; 3/24/87), and it currently consists of the Rickenbacker Air Industrial Park (1,642 acres), located at the Rickenbacker International Airport on Route 317 in Franklin County, Ohio, some 10 miles southeast of downtown Columbus.

The applicant is now requesting authority to expand the general-purpose zone to include a tract (286 acres) adjacent to the existing zone site, north of Route 317. RPA will operate the proposed expansion site as part of its Rickenbacker Air Industrial Park and zone project. A portion of the tract is owned by Spiegel Properties, Inc., which plans to construct a mail order distribution facility to be operated by one of its affiliates. Its initial use of zone procedures would be limited to warehousing/distribution activity.

In accordance with the Board's regulations (as revised, 56 FR 50790–50808, 10–8–91), a member of the FTZ Staff has been designated examiner to investigate the application and report to the Board.

Public comment (original and 3 copies) is invited from interested parties (see FTZ Board address below). The closing date for their receipt is August 30, 1993. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to September 14, 1993.

A copy of the application and accompanying exhibits will be available for public inspection at each of the following locations:

Port Director's Office, U.S. Customs Service, Port Columbus International Airport, 4600 17th Avenue, room 221, Columbus, Ohio 43219.

Office of the Executive Secretary, Foreign-Trade Zones Board, U.S. Department of Commerce, room 3716,

14th & Pennsylvania Avenue, NW, Washington, DC 20230.

Dated: June 24, 1993.

John J. Da Ponte, Jr.,

Executive Secretary.

[FR Doc. 93–15581 Filed 6–30–93; 8:45 am]

BILLING CODE 3510–DS–P

[Docket No. 26–93]

Foreign-Trade Zone 35—Philadelphia, Pennsylvania; Application for Expansion and Application for Processing Meat Products for Export

An application has been submitted to the Foreign-Trade Zones Board (the Board) by the Philadelphia Regional Port Authority, grantee of FTZ 35, requesting authority to expand its zone in the Philadelphia, Pennsylvania, area, within the Philadelphia Customs port of entry, and requesting authority on behalf of American Foodservice Corporation to process meat products for export under zone procedures. The application was submitted pursuant to the provisions of the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR Part 400). It was formally filed on June 21, 1993.

FTZ 35 was approved on March 24, 1978 (Board Order 128, 43 FR 14531; 4/6/78), and expanded on August 21, 1980 (Board Order 162, 45 FR 58388; 9/3/80). The zone project currently consists of three sites in the Philadelphia, Pennsylvania, area: *Site 1* (39 acres)—four facilities within Philadelphia port complex (*1A*—Pier 78 So.; *1B*—Pier 98 So. Annex; *1C*—Piers 38 & 40; *1D*—One Brown St. Warehouse); *Site 2* (22.36 acres)—Trans Freight Systems warehouse, 8415 Envoy Avenue; and *Site 3* (67 acres)—Byberry site, Townsend and McNulty Roads.

The applicant is now requesting authority to expand its zone to include a cold storage/food processing facility (2.7 acres) located at 400 Drew Court, King of Prussia, Pennsylvania, some 20 miles west of Philadelphia. The facility, which is owned and operated by American Foodservice Corporation (AFSC), includes a public cold storage area.

The application also requests authority on behalf of AFSC to process beef for export. The processing activity involves producing hamburger patties for restaurants. AFSC sources some 50 percent of its beef from abroad. All of the hamburger processed under zone procedures would be exported.

In accordance with the Board's regulations (as revised, 56 FR 50790–50808, 10–8–91), a member of the FTZ Staff has been designated examiner to investigate the application and report to the Board. U.S. Department of Agriculture officials will be consulted as part of the review.

Public comment (original and 3 copies) is invited from interested parties (see FTZ Board address below). The closing date for their receipt is August 30, 1993. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to September 14, 1993.

A copy of the application and accompanying exhibits will be available for public inspection at each of the following locations:

U.S. Department of Commerce, Regional Office, 475 Allendale Road, suite 202, King of Prussia, Pennsylvania 19406.

Office of the Executive Secretary, Foreign-Trade Zones Board, U.S. Department of Commerce, room 716, 14th & Pennsylvania Avenue NW., Washington, DC 20230.

Dated: June 24, 1993.

John J. Da Ponte, Jr.,

Executive Secretary.

[FR Doc. 93–15582 Filed 6–30–93; 8:45 am]

BILLING CODE 3510–DS–PM

International Trade Administration

[A–401–801]

Antifriction Bearings (Other Than Tapered Roller Bearings) and Parts Thereof From Sweden; Partial Termination of Antidumping Duty Administrative Reviews

AGENCY: International Trade Administration/Import Administration, Department of Commerce.

ACTION: Notice of partial termination of antidumping duty administrative reviews.

SUMMARY: In response to requests from interested parties, the Department of Commerce initiated reviews for two manufacturers/exporters on July 6, 1992 for the period May 1, 1991 through April 30, 1992, (the POR). One of the firms we initiated reviews for was ITT Jabsco covering sales of ball bearings and parts thereof and cylindrical roller bearings and parts thereof. We received a timely request for withdrawal of these reviews for ITT Jabsco. Because there were no other requests for review of this company from any other interested parties, we are terminating these reviews with respect to ITT Jabsco.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Joseph A. Fargo, Michael Diminich, or Richard Rimlinger; Office of Antidumping Compliance, U.S. Department of Commerce, Washington, DC 20230; telephone: (202) 482–4733.

SUPPLEMENTARY INFORMATION:

Background

On May 15, 1989, the Department of Commerce (the Department) published in the **Federal Register** (54 FR 20900) the antidumping duty orders on ball bearings (BBs) and cylindrical roller bearings (CRBs) and parts thereof from Sweden. On July 6, 1992, in accordance with 19 CFR 353.22(c), we initiated administrative reviews of those orders for the period May 1, 1991 through April 30, 1992 (57 FR 29791).

We had initiated reviews for ITT Jabsco covering sales of ball bearings and parts thereof and cylindrical roller bearings and parts thereof during the period of review. We received a timely request for withdrawal of these reviews for ITT Jabsco. Because there were no other requests for review of this company from any other interested parties, we are terminating these reviews with respect to ITT Jabsco, in accordance with 19 CFR 353.22(a)(5).

This partial termination notice is in accordance with section 353.22(a)(5) of the Department's Regulations.

Dated: June 23, 1993.

Joseph A. Spetrini,

Acting Assistant Secretary for Import Administration.

[FR Doc. 93–15583 Filed 6–30–93; 8:45 am]

BILLING CODE 3510–DS–M

National Oceanic and Atmospheric Administration

[Docket No. 930493–3093]

NOAA Climate and Global Change Program—Program Announcement

AGENCY: National Oceanic and Atmospheric Administration, Department of Commerce.

ACTION: Notice.

SUMMARY: The Climate and Global Change Program represents a National Oceanic and Atmospheric Administration (NOAA) contribution to evolving national and international programs designed to improve our ability to observe, understand, predict, and respond to changes in the global environment. This program builds on NOAA's mission requirements and longstanding capabilities in global change research and prediction. The NOAA Program is a key contributing element of the U.S. Global Change

Research Program (USGCRP), which is coordinated by the interagency Committee on Earth and Environmental Sciences. NOAA's program is designed to complement other agency contributions to that national effort.

NOAA believes that the Climate and Global Change Program will benefit significantly from a strong partnership with outside investigators. Current Program plans assume that 30–35% of the total resources available ($69.9 Million was requested in the President's FY94 budget) will support extramural efforts, particularly those involving the broad academic community. Approximately 35% will be applied toward extramural grants and cooperative agreements already in progress and those proposals submitted in FY93 that were recommended for funding in FY94. Remaining funds, approximately, $20 million will be available for new grants an cooperative agreements. This Program Announcement is for projects to be conducted by investigators both inside and outside of NOAA, primarily over a one to two year period. Three year proposals will be considered for mature projects. Award decisions are made based upon independent peer review of each proposal. There is no established upper or lower limit on the awards; the range of grants and cooperative agreements may vary depending on many factors, including the actual budget and the types of proposals received relative to the priorities in the program. (In the past, grants and cooperative agreements ranging from below $10,000 to over $1 million have been funded.) Actual funding levels may be subject to change depending on the final FY94 budget appropriation. Funding for non-U.S. institutions is not available under this announcement.

DATES: Schedule for Submissions and Funding. The deadlines for submission to the FY 1994 process are: Letters of intent received at OGP on or before July 9, 1993. Full proposals received at OGP on or before August 9, 1993.

The time from target date to grant award varies with program area. We anticipate that review will occur during the fall of 1993 and funding should begin during the early spring of 1994 for most approved projects. March 1, 1994 should be used as the proposed start date on proposals, unless otherwise directed by the appropriate Program Officer. Applicants should be notified of their status within 3 to 6 months.

ADDRESSES: Proposals may be submitted to: Office of Global programs, National Oceanic and Atmospheric Administration, 1100 Wayne Avenue, suite 1225, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Irma duPree, The Office of Global Programs, National Oceanic and Atmospheric Administration, at the address given above, (301) 427–2089; OMNET: I.DUPREE.

SUPPLEMENTARY INFORMATION:

Program Authority

49 U.S.C. 1463; 15 U.S.C. Section 313; 15 U.S.C. 2901; and 15 U.S.C. 2921.

(CFDA No. 11.431—Climate and Global Change)

Program Objectives

The long term objective of the Climate and Global Change Program is to provide reliable predictions of climate change and associated regional implications on time scales ranging from seasons to a century or more. NOAA believes that these time scales can be studied with an acceptable probability of success and are the most relevant for fundamental social concerns. Predicting the behavior of the coupled ocean-atmosphere-land surface system will characterize NOAA's role in a successful national effort to deal with observed or anticipated changes in the global environment.

Program Priorities

In FY 1994, NOAA will give priority attention to individual proposals in the areas described below. Investigators are asked to specify clearly which of these areas is being pursued.

Atmospheric Chemistry

The Atmospheric Chemistry Project focuses on global monitoring, process-oriented laboratory and field studies, and theoretical modeling to improve the predictive understanding of atmospheric trace gases that influence the Earth's chemical and radiative balance. FY 1994 grants in Atmospheric Chemistry will focus on studies associated with the International Global Atmospheric Chemistry (IGAC) program of the IGBP. Proposals are solicited for the following: (i) (Highest priority) the Northern Atlantic Regional Study (NARE), with emphasis on intensive field studies and modeling; (ii) the International Support Activity: intercalibrations/intercomparisons, with emphasis on the Nonmethane Hydrocarbon Intercomparison Experiment; (iii) the East Asian/North Pacific Regional Experiment (APARE), with emphasis on coordination of ground-based chemical measurements and diagnostic analyses and modeling of regional chemical processes; and (iv) the Northern Wetlands Study (NOWES) and associated programs, with emphasis on atmospheric chemical processes. In addition, proposals are solicited for polar stratospheric ozone research, with an emphasis on airborne studies. For an information sheet containing further details, contact: Joel Levy, NOAA/Global Programs, 301–427–2089 ext. 756, OMNET: J. Levy, or Fred C. Fehsenfeld, NOAA/Aeronomy Laboratory, Boulder, CO; 303–497–5819.

Long Term Ocean Observations

The Long-Term Ocean Observations (L–TOO) program has been created by merging and restructuring the previous program elements: Global Sea Level program and Surface and Upper Ocean Observations program (SUOOP). The long range goal of L–TOO is to develop and demonstrate methodologies for long-term ocean observations, analyses and interpretations as a continuing contribution to the climate module of the Global Ocean Observing system (GOOS); long-term observations currently part of L–TOO may ultimately become part of GOOS. GOOS will consist of regular global coverage provided by satellites and in situ measurements to monitor and document climatic variability and enable its prediction. In FY 1994, L–TOO priority will be given to sampling strategy, tradeoff, and sensitivity studies for the design and implementation of a long-term ocean observing system that will efficiently and affordably satisfy the observational needs for climate research and prediction, especially for international processes such as ENSO. The following parameters have been selected as the first priority for L–TOO observations: Relative sea level and related vertical land movement sea surface temperature, upper ocean temperature, surface winds, sea surface salinity, upper ocean salinity, surface temperature of the ice cover, sea ice thickness and change in land ice mass. As a lesser priority, L–TOO also seeks proposals for studies of interannual to decadal sea level variability, its meteorological and oceanographic causes and its effective removal from multi-decadal sea level records. For further information contact: William Woodward, NOAA/National Ocean Service, Rockville, MD, 301–443–8110, OMNET: W. Woodward, or Michele Bullock, NOAA/Global Programs, Silver Spring, MD, 301–427–2089 ext 716, OMNET: M. Bullock.

Atlantic Climate Change

The goal of this project is to determine the nature and influence of interactions between the meridional

circulation of the Atlantic Ocean, sea surface temperature and salinity, and the global atmosphere. Proposals are sought in the following areas: (i) Studies using models or historical data to examine variability in the climate system resulting from interactions between the global atmosphere and the Atlantic Ocean; (ii) modeling and field work, including satellite-derived analyses, that enhance our knowledge of the maintenance and variability of the relatively warm upper layer water in the Grant Banks region, and what role this may play in the larger scale atmospheric and oceanic climate system; (iii) use of conceptual and numerical models to synthesize near surface data (e.g. surface drifters, XBTs and sea level) and data from the full water column (e.g. hydrographic, tracer and other data sets); (iv) documentation of the general characteristics of decadal/century modes of Atlantic variability for model validation through synthesis of information from both instrumental and proxy sources.

For further information contact: David Goodrich, NOAA/Office of Global Programs, Silver Spring, MD; 301–427–2089 ext. 38, OMNET: D. Goodrich.

Tracers and WOCE Hydrography

As part of NOAA's contribution to the World Ocean Circulation Experiment (WOCE), proposals are sought for tracer observations on WOCE hydrographic cruises. Of particular interest are studies employing tracers operating on decadal to centennial time scales, including chlorofluorocarbons, helium-3/tritium, and carbon isotopes. WOCE-related proposals will be jointly reviewed by NOAA and the National Science Foundation (NSF) as part of the interagency WOCE Program Announcement. Proposals for this element should be submitted directly to the NSF Ocean Sciences Division, using NSF format. For further information contact: David Goodrich, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 38. OMNET: D. Goodrich.

Ocean-Atmosphere Carbon Fluxes

As part of NOAA's contribution to the Joint Global Ocean Flux Study (JGOFS) and as a continuing effort aimed at improving our understanding of the role of the ocean in sequestering the increasing burden of antropogenically derived carbon dioxide in the atmosphere, proposals are sought for the planned FY 1994 NOAA research cruise along 110 degrees West longitude in the South Pacific Ocean. Proposals addressing the measurement of specific chemical variables including alkalinity, pH, nutrients, dissolved organic carbon, dissolved organic nitrogen, primary productivity and carbon isotopes are encouraged. For an information sheet containing further details, contact: James F. Todd, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 32, OMNET: J. Todd.

Tropical Oceans and Global Atmosphere (TOGA)

The goal of the TOGA Program is to understand and model the coupled variations of the global atmospheric circulation and tropical ocean circulation for the purpose of predicting the interannual variability of the atmospheric regime. TOGA supports research in the areas of monitoring and data management, empirical studies, modeling and prediction as well as the computer infrastructure necessary to support this research. Proposals for TOBA COARE will be solicited under a separate announcement to be issued jointly by NOAA and NSF. For further information contact: Kenneth Mooney, NOAA/Office of Global Programs, Silver Spring, MD; 301–427–2089 ext. 14, OMNET: K. Mooney.

Operational Measurements

The overall goal of this program is to develop and generate continuing climate and global change information products from NOAA operational measurement systems including environmental satellite and in-situ observing systems. Emphasis will be placed on satellite-based or combined satellite/in-situ products representing the following variable suites: (i) Oceanic variables; (ii) land surface variables; (iii) earth radiation budget, atmospheric water vapor, clouds and aerosols; (iv) temperature, moisture and wind soundings; (v) stratospheric variables; and (vi) precipitation (see also Atmospheric and Land Surface Processes program). Supported activities are broad and include: instrument calibration; monitoring to meet climate and global change requirements; development and testing of remote sensing product algorithms; operational generation of data and information products; and product evaluation, application, and analysis. Priority for this year will be given to proposals that utilize satellite or combined satellite and in-situ operational data sets in numerical climate models, model validation, cloud/radiation problems, climate diagnostic studies, and time series analysis of climate variables. For further information, contact: Arnold Gruber, NOAA/NESDIS, Washington, DC 20233; 301–763–8127; OMNET: A. Gruber, or Bill Murray, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 26; OMNET: W. Murray.

Information Management

The goals of this project are: (i) To provide the organization and focus through which data producers, data managers and data users actively participate in the design, implementation and review of the NOAA Climate and Global Change (C&GC) information management system, (ii) to assist in construction of data and information (metadata) sets required by C&GC researchers, (iii) to provide users with easy access to C&GC data and information and (iv) to manage long-term C&GC data and information archives. Proposals are sought which support the data and information management goals of the NOAA C&GC Program. Priorities include construction of long-term climate and global change data sets and information products involving data assembly, digitization, quality control and data rescue, and support of information management applicable to national and international research programs. In particular, there will be continued and increased support for proposals that address the information management requirements of the C&GC Program science elements. Proposals to enhance system and infrastructure responsibilities without firm science driven objectives will not be considered. For further information contact: Christopher Miller, NOAA/NESDIS, Washington, DC 20235, 202–606–5012, OMNET: C.Miller.NOAA, or Bill Murry, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 26, OMNET: W.Murray.

Atmospheric and Land Surface Processes

This program supports research into the wide range of problems that limit our understanding of those atmospheric and land surface processes through which the overall energy and water balance of the Earth's climate system is maintained. Priority is given to proposals directed at understanding and modeling processes associated with: (i) Clouds, aerosols and water vapor, (ii) precipitation, and (iii) land surface hydrology. Proposals are encouraged which support the objectives of the Global Energy and Water Cycle Experiment (GEWEX), including the GEWEX Continental-Scale International Project (GCIP) which has the Mississippi Basin as its primary study area. Detailed science plans have been prepared for GEWEX and GCIP. In view of the strong interest in conducting and supporting research directed at programs in these areas, close

coordination in reviewing and funding proposals will be maintained between NOAA and other USGCRP funding agencies such as NASA and NSF. For further information contact: Michael Coughlan, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 40, OMNET: M.Coughlin.

Marine Ecosystem Response

The principal objective of the Marine Ecosystem Response Program is to determine the relationship between ecosystem dynamics and the climatic variability associated with global change. The majority of the resources of this program will be devoted to the USGCRP Global Ocean Ecosystem Dynamics (U.S. GLOBEC) program. A solicitation for proposals, separate from this announcement, will be issued by the jointly supported (NSF/NOAA) U.S. GLOBEC program, and will be directed primarily at the U.S. GLOBEC Northwest Atlantic Field Study. In addition to U.S. GLOBEC activities, some resources will be devoted to the early detection of climate change. Under this activity, modest proposals are sought for the development of coordinated, scientifically based monitoring of coral reef ecosystems and innovative pilot projects. For further information and to be added to a mailing list for the joint NSF/NOAA announcement, contact Bill Peterson, NOAA/National Marine Fisheries Service, Silver Spring, MD; 301–713–2055, OMNET: W.Peterson, or Mark Eakin, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 710, OMNET: M.Eakin.

Paleoclimatology

The Paleoclimatology Program solicits proposals that will make significant advances in our understanding of decade-to century-scale variability in the climate system. This includes use of new, high-resolution time series from climatically-sensitive areas presently without adequate data coverage (e.g., the tropics and Southern Hemisphere), and large datasets that can be used to reconstruct large-scale historical patterns of climatic change. FY 1994 funds will also be available for the development of databases used to verify climate and ocean models. For further information contact Jonathan Overpeck of NOAA/National Geophysical Data Center, Boulder, CO; 303–497–6172, OMNET: J.Overpeck, or Mark Eakin, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 710, OMNET: M.Eakin.

Economics

NOAA is supporting applied economics research on climate and global change that increases our understanding of (a) information and decision making under uncertainty and (b) impacts and adaptation. For FY 1994, proposals on the following topics are solicited: (1) Value of scientific and economic information for decisions relating to seasonal, annual, or decadal climate phenomenon, and (2) economic consequences of climate and global change, particularly on coastal areas including the Great Lakes Basin. For example, analyses of the value of reducing uncertainty in ENSO forecasts for improved regional decision-making are needed. In general, studies are encouraged that show a clear contribution to natural resource management. Interdisciplinary teams of researchers that include both physical and social scientists are strongly recommended. For an information sheet containing additional details contact: Sally Kane, NOAA's Economics Group, 1825 Connecticut Avenue, NW., suite 625, Washington, DC 20235, 202–606–4360; OMNET: S.Kane, Or Daphne Gemmill, NOAA/Office of Global Programs, Silver Spring, MD; 301–427–2089 ext. 20, OMNET: D.Gemmill.

Human Dimensions

This program complements the Economics program by focusing on understanding human dimensions of global change using the non-economic social sciences. The program encourages activities related to NOAA's mission that utilize the theories and methods of sociology, anthropology, geography, and the policy sciences to understand both the human forcing functions of environmental change and the impacts of global change on human society. Multidisciplinary approaches to understanding these issues are encouraged. In FY 1994 proposals are solicited to: (1) Understand the impact of global change along coastal margins and on climate sensitive ocean industries, and (2) contribute to our knowledge of past climate change and human adaptation via historical (including archaeological) disciplines. Funding for FY 1994 has been requested but has not yet been authorized. For further information contact: Shirley Fiske, NOAA/SEA Grant, Silver Spring, MD; 301–713–2431, OMNET: S.Fiske, BITNET: Fiske @ UMDD, or Daphne Gemmill, NOAA/Office of Global Programs, Silver Spring, MD; 301–427–2089 ext. 20, OMNET: D.Gemmill.

Education

The principal objective of the Climate and Global Change Education Program is to develop innovative and creative methods for educating community leaders and the general public concerning current knowledge on climate and global change issues, such as natural climate variability, ozone depletion, greenhouse warming, marine and terrestrial response, and sea level rise. In FY 1994 we will entertain proposals for development of a program to provide regional "training the trainer" programs for people such as library, aquarium, and museum staffs, NOAA employees, local extension educators, teachers and community leaders who can communicate complex climate and global change issues to audiences of other educators (both formal and informal), decision-makers and ultimately the general public. A secondary thrust is to fund a limited number of small, low-budget innovative projects usually involving state-of-the-art communication methods that have the ability to reach large audiences, either a high percentage of community leaders or the general public. Cooperative, leveraged programs with goal evaluative techniques are emphasized. Funding for FY 1994 has been requested but has not yet been authorized. For further information contact: Bernard Griswold, NOAA/National Sea Grant College Programs, Silver Spring, MD; 301–713–2431, OMNET: B.Griswold, or Daphne Gemmill, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 20, OMNET: D.Gemmill.

Solar Influences

The goals of this project are to quantify the physical and chemical responses of the mesosphere and upper stratosphere to the influx of energetic charged particles and short wavelength solar radiation and to assess the importance of those responses to the short and long-term behavior of Earth's atmosphere. The major resource available for this effort is 15 years of observations by NOAA satellite instrumentation of these forms of energy inputs to the atmosphere. The current emphasis in the program is the utilization of these observations as starting points for the quantitative modeling of their effects upon the upper atmosphere. An increase in funding for FY 1994 has been requested, in large part to support the modeling activities by means of a competitive grants program. However, such a funding increase has not yet been authorized. For further information contact: David

Evans, Space Environment Laboratory, Boulder, CO, 303–497–3269, or Daphne Gemmill, NOAA/Global Programs, Silver Spring, MD; 301–427–2089 ext. 20, OMNET: D. Gemmill.

Letters of Intent

Letters of intent are being implemented as part of this announcement. Letters should be no more than two pages in length and include the name and institution of principal investigator(s), a statement of the problem, brief summary of work to be completed, approximate cost of project and program element(s) to which the proposal should be directed. These will be evaluated by program management, according to the selection criteria below, and applicants will be notified in writing in July 1993, whether they have been selected to submit a full proposal or not. It is in the best interest of applicants and their institutions to submit letters of intent. Projects deemed unsuitable during program review should not be submitted as full proposals. Full proposals submitted without prior submission in letter form will be subjected to program review before entering into the mail review process, thus delaying their review.

Selection Criteria

Criteria for Evaluation and Selection: Evaluation criteria (with approximate weights) are as follows:

- Scientific Merit (40%): Intrinsic scientific value of the study; importance and relevance to the goal of the Climate and Global Change Program and to the research areas listed above.
- Methodology (20%): Focused scientific objective and strategy, including measurement strategies and data management considerations; project milestones; and final products.
- Readiness (20%): Nature of the problem; relevant history and status of existing work; level of planning, including existence of supporting documents; strength of proposed scientific and management team; past performance record of proposers.
- Linkages (10%): Connections to existing or planned national and international programs; partnerships with other agency or NOAA participants, where appropriate.
- Costs (10%): Adequacy of proposed resources; appropriate share of total available resources; prospects for joint funding; identification of long-term commitments. Matching funding is encouraged, but is not required.

Award decisions are made based upon independent peer review and programmatic review of each proposal. Unsatisfactory performance by a recipient under prior federal awards may result in an application not being considered for funding.

Eligibility

Extramural eligibility is not limited and is encouraged with the objective of developing a strong partnership with the academic community. Non-academic proposers are urged to seek collaboration with academic institutions. Universities, non-profit organizations, for profit organizations, State and local governments, and Indian Tribes, are included among entities eligible for funding under this announcement. While not a prerequisite for funding, applicants are encouraged to consider conducting their research in one or more of the National Marine Estuarine Research Reserve System or National Marine Sanctuary sites. For further information on these field laboratory sites, contact Dr. Michael Crosby, NOAA/NOS, 202–606–4126.

Proposal Submission

The guidelines for proposal preparation provided below are mandatory. Failure to heed these guidelines may result in proposals being returned without review.

Proposals submitted to the NOAA Climate and Global Change Program must include the original and two copies of the proposal. Proposals must be limited to 30 pages (numbered), including budget, investigators vitae, and all appendices, and should be limited to funding requests for one to three year duration. Proposals should be sent to the NOAA Office of Global Programs at the above address. Facsimile transmissions of full proposals will not be accepted. All proposals should include the following elements:

1. Signed title page: The title page should be signed by the Principal Investigator (PI) and the institutional representative and should clearly indicate which project area is being addressed. The PI and institutional representative should be identified by full name, title, organization, telephone number and address.

2. Abstract: An abstract must be included and should contain an introduction of the problem, rationale and a brief summary of work to be completed. The abstract should appear on a separate page, headed with the proposal title, institution(s) investigator(s), total proposed cost and budget period.

3. Statement of work: The proposed project must be completely described, including identification of the problem, scientific objectives, proposed methodology, relevance to the goal of the Climate and Global Change Program, and the program priorities listed above. Benefits of proposed project to the general public and the scientific community should be discussed. Results from related projects supported by NOAA and other agencies should be included. The statement of work, excluding figures and other visual materials, must not exceed 15 pages of text. Appended information may not be used to circumvent the page length limit. Investigators wishing to submit group proposals that may exceed the 15 page limit should discuss this possibility with the appropriate Program Officer prior to submission. In general, proposals from 3 or more investigators may include a statement of work containing up to 10 pages of overall project description plus up to 5 pages per person of individual project descriptions.

4. Budget: A detailed budget is required. Personnel costs, including salaries and fringe benefits, permanent equipment, expendable equipment, travel, publication costs, indirect costs and other costs such as those for supplies, printing, computer time or utilities must be included. The target start date for proposal submission is published in announcements describing program priorities and timetables. This date should be used in all submissions. A sample budget sheet is available upon request.

5. Vitae: Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last three years with up to five other relevant papers.

6. Current and pending support: For each investigator, submit a list that includes project title, supporting agency with grant number, investigator months, dollar value and duration. Requested values should be listed for pending support.

7. List of suggested reviewers: The cover letter may include a list of individuals qualified and suggested to review the proposal. It also may include a list of individuals that applicants would prefer to not review the proposal. Such lists may be considered at the discretion of the Program Officer.

8. Other requirements:

(a) Application for Federal assistance must be submitted on Standard Form 424(Rev 4–88), Standard Form 424A (4–88), and Standard Form 424B(Rev 4–88).

(b) All primary applicants must submit the form CD–511 "Certifications regarding Debarment, Suspension and Other Responsibility Matters; Drug-Free Workplace Requirements and Lobbying".

(i) *Nonprocurement Debarment and Suspension.* Prospective participants (as defined at 15 CFR part 26, section 105) are subject to 15 CFR part 26, "Nonprocurement Debarment and Suspension," and the related section of Form CD–511.

(ii) *Drug Free Workplace.* Grantees (as defined at 15 CFR part 26, section 605) are subject to 15 CFR part 26, subpart F, "Governmentwide Requirements for Drug-Free Workplace (Grants)" and the related section of Form CD–511.

(iii) *Anti-Lobbying.* Persons (as defined at 15 CFR part 28, section 105) are subject to the lobbying provisions of 31 U.S.C. 1352 "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions", and the lobbying section of Form CD–511 apply to applications/bids for grants, cooperative agreements, and contracts for more than $100,000, and loans and loan guarantees for more than $150,000, or the single family maximum mortgage limit for affected programs, whichever is greater.

(iv) *Anti-Lobbying Disclosures.* Any applicant that has paid or will pay for lobbying using any funds must submit an SF–LLL, "Disclosure of Lobbying Activities," as required under 15 CFR part 28, appendix B.

(c) Recipients shall require applicants/bidders for subgrants, contracts, subcontracts, or lower tier covered transactions at any tier under the award to submit, if applicable, a completed Form CD–512, "Certifications Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions and Lobbying" and disclosure form SF–LLL Form CD–512 is intended for the use of recipients and should not be transmitted to NOAA. SF–LLL submitted by any tier recipient or subrecipient should be submitted to NOAA in accordance with the instructions contained in the award document.

(d) Recipients and subrecipients are subject to all applicable Federal laws and Federal and Department of Commerce policies, regulations, and procedures applicable to Federal financial assistance awards.

(e) Applicants that incur costs prior to an award being made do so solely at their own risk of not being reimbursed by the Government. Notwithstanding any verbal assurance that may have been received, there is no obligation to the applicant on the part of the Department of Commerce to cover pre-award costs.

(f) This program is subject to the requirements of OMB Circular No. A–110, "Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organization", and 15 CFR part 24, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Government", as applicable. This program is excluded from coverage under Executive Order 12372.

(g) All non-profit and for-profit applicants are subject to a name check review process. Name checks are intended to reveal if any key individuals associated with the applicant have been convicted of, or is presently facing criminal charges such as fraud, theft, perjury, or other matters which significantly reflect on the applicant's management, honesty, or financial integrity.

(h) Applicants are reminded that inclusion of false information on an application can provide grounds for denying or terminating funds. In addition, applicants who have outstanding debts with the Federal Government may not be considered for funding until these debts have been paid or arrangement satisfactory to the Department of Commerce are made.

(i) No award of Federal funds shall be made to an applicant who has an outstanding delinquent quent Federal debt until either:

(i) The delinquent account is paid in full,

(ii) A negotiated repayment schedule is established and at least one payment is received; or

(iii) Other arrangements satisfactory to the Department of Commerce are made.

If an application is selected for funding, the Department of Commerce has no obligation to provide any additional future funding in connection with the award. Renewal of an award to increase funding or extend the period of performance is at the total discretion of the Department of Commerce.

In accordance with Federal statutes and regulations, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, denied benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the NOAA Climate and Global Change Program. The NOAA Climate and Global Change Program does not have direct TDD (Telephonic Device for the Deaf) capabilities, but can be reached through the State of Maryland supplied TDD contact number, 800–735–2258, between the hours of 8 a.m.–4:30 p.m.

Date: May 20, 1993.

J. Michael Hall,

Director, Office of Global Programs, National Oceanic Atmospheric Administration.

[FR Doc. 93–15525 Filed 6–30–93; 8:45 am]

BILLING CODE 3510–12–M

Marine Mammals; Permits.

AGENCY: National Marine Fisheries Service, (NMFS), NOAA. Commerce.

ACTION: Issuance of Permit No. 841 (P129J).

SUMMARY: On February 9, 1993, notice was published in the **Federal Register** (58 FR 7770) that Dr. Bruce R. Mate, Oregon State University, Newport, Oregon 97365–5296 and had filed an application for a Permit to harass up to 200 each of blue whales (*Balaenoptera musculus*), fin whales (*B. physalus*), humpback whales (*Megaptera novaeangliae*), and gray whales (*Eschrichtius robustus*) of which 50 would be tagged with an Argos satellite-monitored radio transmitter and biopsy sampled over a 5-year period. No more than 15 whales of each species will be tagged in a single year.

Notice is hereby given that on June 24, 1993, as authorized by the provisions of the Marine Mammal Protection Act of 1972 (MMPA) (16 U.S.C. 1361 *et seq.*) and the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 *et seq.*), the NMFS issued a Permit for the above taking, subject to certain conditions set forth therein.

Issuance of this Permit, as required by the ESA of 1973, is based on a finding that the Permit: (1) Was applied for in good faith; (2) does not operate to the disadvantage of the endangered species which is the subject of this Permit; and (3) is consistent with the purposes and policies set forth in section 2 of the ESA of 1973. This Permit was issued in accordance with and is subject to parts 220–222 of title 50 CFR, the NMFS regulations governing endangered species permits.

ADDRESSES: Documents submitted in connection with this permit are available for review by writing to or by appointment in the Permits Division, Office of Protected Resources, NMFS, NOAA, 1335 East-West Hwy., room 7324, Silver Spring, MD 20910 (301/713–2289); Director, Northwest Region, NMFS, NOAA, 7600 Sand Point Way, NE BIN C15700, Seattle, WA 98115 (206/526–6150); Director, Southwest Region, NMFS, 501 West Ocean Boulevard, Suite 4200, Long Beach, CA 90802–4213 (310/980–4015); and Director, Alaska Region, NMFS, Federal Annex, 9109 Mendenhall Mall Rd.,

Suite 6 Juneau, AK 99802 (907/586–7221).

Dated: June 24, 1993.

William W. Fox, Jr.,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 93–15507 Filed 6–30–93; 8:45 am]

BILLING CODE 3510-22-M

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton and Man-Made Fiber Textile Products Produced or Manufactured in Thailand

June 28, 1993.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs increasing limits.

EFFECTIVE DATE: July 6, 1993.

FOR FURTHER INFORMATION CONTACT: Ross Arnold, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port or call (202) 927–6717. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Executive Order 11651 of March 3, 1972, as amended; section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854).

The current limits for certain categories are being increased for carryover.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see Federal Register notice 57 FR 54976, published on November 23, 1992). Also see 57 FR 53475, published on November 10, 1992.

The letter to the Commissioner of Customs and the actions taken pursuant to it are not designed to implement all of the provisions of the bilateral agreement, but are designed to assist only in the implementation of certain of its provisions.

Rita D. Hayes,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

June 28, 1993.

Commissioner of Customs,

Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on November 4, 1992, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool, man-made fiber, silk blend and other vegetable fiber textiles and textile products, produced or manufactured in Thailand and exported during the twelve-month period which began on January 1, 1993 and extends through December 31, 1993.

Effective on July 6, 1993, you are directed to amend the November 4, 1992 directive to increase the limits for the following categories, as provided under the terms of the current bilateral textile agreement between the Governments of the United States and the Thailand:

Category	Twelve-month limit [1]
Sublevels in Group II	
334/634	475,834 dozen.
335/635/835	382,655 dozen.
336/636	249,439 dozen.
342/642	461,463 dozen.
345	218,970 dozen.
640	398,207 dozen.

[1] The limits have not been adjusted to account for any imports exported after December 31, 1992.

The Committee for the Implementation of Textile Agreements has determined that these actions fall within the foreign affairs exception to the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Rita D. Hayes,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 93–15530 Filed 6–30–93; 8:45 am]

BILLING CODE 3510-DR-F

DEPARTMENT OF DEFENSE

Public Information Collection Requirement Submitted to OMB for Review

AGENCY: DoD.

ACTION: Notice.

The Department of Defense has submitted to OMB for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35).

Title, Applicable Form, and Applicable OMB Control Number: Guidelines for Major Contractor Submission Independent Research and Development and Bid and Proposal Financial and Technical Information.

Type of Request: New collection.

Average Burden Hours/Minutes Per Response: 100 hours.

Responses Per Respondent: 2.

Number of Respondents: 300.

Annual Burden Hours: 60,000.

Annual Responses: 600.

Needs and uses: The guidelines will be used to furnish the contractors guidance on financial information needed to support Independent Research and Development and Bid and Proposal costs and on technical information. The information collection will be used to support Independent Research and Development and Bid and Proposal from major contractors.

Affected Public: Businesses or other for-profit and Federal agencies or employees.

Frequency: On occasion.

Respondent's Obligation: Required to obtain or retain a benefit.

OMB Desk Officer: Mr. Peter N. Weiss. Written comments and recommendations on the proposed information collection should be sent to Mr. Weiss at the Office of Management and Budget, Desk Officer of DoD, room 3235, New Executive Office Building, Washington, DC 20503.

DoD Clearance Officer: Mr. William P. Pearce. Written requests for copies of the information collection proposal should be sent to Mr. Pearce, WHS/DIOR, 1215 Jefferson Davis Highway, suite 1204, Arlington, VA 22202–4302.

Dated: June 25, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15470 Filed 6–30–93; 8:45 am]

BILLING CODE 5000-04-M

Office of the Secretary

Establishment of the Armament Retooling and Manufacturing Support (ARMS) Executive Advisory Committee

AGENCY: DoD.

ACTION: Notice.

SUMMARY: Under the provisions of Public Law 92–463, the "Federal Advisory Committee Act," notice is hereby given the ARMS Executive Advisory Committee (hereinafter referred to as ARMS EAC) is being established within the Department of Defense (DoD). The ARMS EAC is authorized to be established in the

Conference Report accompanying Public Law 102–484, the National Defense Authorization Act for Fiscal Year 1993. Section 193 of the Authorization Act directs the Secretary of the Army to carry out an ARMS initative which encourages commercial firms to use government-owned-contractor-operated (GOCO) manufacturing facilities of the DoD for commercial purposes.

The ARMS EAC will provide a communications forum whereby a distinguished group of both industry and government experts will advise the Secretary of the Army concerning changing roles for GOCO Army ammunition plants. In studying the objectives of the ARMS initiative, the ARMS EAC will review and make recommendations regarding the Army plan for implementation. Specific tasks will include: Assessing government and industry expectations for the ARMS initiative; evaluating the incentives, eg., marketing, use of facilities and equipment, loan guarantees, planning grants, environmental concerns, free trade zones, for utilizing the idle capacity at industrial facilities for the manufacturing of government and commercial products; reviewing existing laws, regulations, and policies as to adequacy and possible need for revision or expansion; and, gauging the Army's plans for plant utilization, disposal of excess plant equipment, and allowance for contingencies.

The ARMS EAC will be comprised of approximately sixteen members, eight from the private sector and eight from government, who will be acknowledged experts and leaders in the diverse disciplines associated with industrial plant operations and processes. The common characteristic of the issues they will study is the management of change in the Army's ammunition industrial base. Consequently, the individuals selected to serve on the Committee must be accomplished in their ability to understand and manage change at the manufacturing level and have considerable experience in tooling processes to retain a viable ammunition production base alongside commercial ventures/products. Efforts will be made to ensure that the membership is well-balanced in terms of the functions to be performed and the interest groups represented.

For additional information regarding the ARMS EAC, please contact Mr. Dick Auger, telephone: 703–274–9573.

Dated: June 25, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15471 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

Establishment of the Cultural and Natural Resources Committee for the Yakima Training Center and Expansion Area

AGENCY: DoD.

ACTION: Notice.

SUMMARY: Under the provisions of Public Law 92–463, the "Federal Advisory Committee Act," notice is hereby given that the Cultural and Natural Resources Committee for the Yakima Training Center and Expansion Area (hereinafter referred to as the Yakima Committee) is being established within the Department of Defense (DoD). The Yakima Committee is authorized to be established in Conference Report 102–236 of the Fiscal Year 1992 Military Construction Appropriations Bill. In the Conference Report, the Secretary of the Army is directed to establish the Committee consisting of representatives from the Yakima Indian Nation, the Wanapum people, appropriate Federal agencies, and appropriate State agencies and local elected officials from the affected area appointed by the Governor of the State of Washington.

The Yakima Committee will provide advice to the Secretary of the Army and other senior Army officials concerning the proper management of all training center lands and provide a process to identify land management issues and appropriate mitigation, reclamation and resolution steps. Principally, the Yakima Committee will assist the Army in developing a comprehensive, integrated training strategy that addresses all factors affecting training and land use. This will include: Identifying cultural and resource conflicts and the means to overcome them; devising strategies to promote land management flexibility; developing work plans, time frames, and cost estimates for the completion of each event; and, reviewing and revising as necessary work plans annually, as well as surfacing additional issues related to the training and land reclamation efforts.

The Yakima Committee will be comprised of approximately 24 members with expertise in the fields of military training, wildlife, fish, water quality, range and vegetation, recreation, cultural resources, and information management. Members will be selected from both private and governmental agencies, as indicated in the opening paragraph above. Efforts will be made to ensure that the membership is well-balanced in terms of the functions to be performed and the interest groups represented.

For additional information regarding the ARMS EAC, please contact Ms. Sandra Riley, telephone: 703–697–6900.

Dated: June 25, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15472 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

Availability of Change 1 to DoD 5025.1–I, "DoD Directives System Annual Index"

AGENCY: Office of the Secretary, DoD.

ACTION: Notice.

SUMMARY: This document is to inform the public and Government Agencies of the availability of Change 1 to DoD 5025.1–I, "DoD Directives System Annual Index," dated January 1993. It is available, at cost, from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487–4650. The NTIS accession number for Change 1 to the Index is PB93–959521.

FOR FURTHER INFORMATION CONTACT: Ms. P. Toppings, Directives Division, Correspondence and Directives Directorate, Washington Headquarters Services, Washington, DC 20301–1155, telephone (202) 697–4111.

Dated: June 25, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15469 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

Assistance to Local Educational Agencies (LEAs)

AGENCY: Office of the Secretary, DoD.

ACTION: Notice of a program for providing financial assistance to LEAs.

SUMMARY: Pursuant to title II of Public Law 102–368 and to implement section 386 of Public Law 102–484, notice is hereby given of a program to provide financial assistance to eligible LEAs. Section 386(b) of Public Law 102–484 requires DoD to assist an LEA that cannot, without such aid, "provide [its] students * * * with a level of education that is equivalent to the minimum level of education available in schools of the

other local educational agencies of the same State," provided that the LEA meets one of the two criteria established by section 386(c). Title II of Public Law 102–368, as amended, requires DoD to assist eligible LEAs "where there are significant increases in the number of military dependent students as the result of relocation or realignment of Armed Forces personnel." For the purpose of this notice, the term "military dependent students" has the same meaning as in section 386(e) of Public Law 102–484. In making the necessary determination under section 386(b), the Secretary of Defense must consult the Secretary of Education.

DATES: July 1, 1993.

ADDRESSES: Deputy Assistant Secretary of Defense (Personnel Support, Families & Education), room 3E784, The Pentagon, Washington, DC 20301–4000.

FOR FURTHER INFORMATION CONTACT: Dr. Hector O. Nevarez or Mr. John B. Shaver, Section 6 Schools, 1225 Jefferson Davis Highway, Crystal Gateway #2, suite 1500, Arlington, VA 22202; telephone (703) 746–7874 or 7875; facsimile number (703) 746–8103.

SUPPLEMENTARY INFORMATION: During fiscal year (FY) 1993, the Department of Defense shall provide 50 million dollars to assist LEAs that meet criteria in title II of Public Law 102–368 and section 386 of Public Law 102–484. (For the purposes of this program, DoD shall rely on data from the Department of Education).

Pursuant to subsection 386(c)(1) of Public Law 102–484, an LEA is eligible for assistance under this program if it satisfies subsection 386(b) and "at least 30 percent (as rounded to the nearest whole percent) of the students in average daily attendance in the schools of that agency in that fiscal year are military dependent students counted under subsection (a) or (b) of section 3 of the Act of September 30, 1950 (Public Law 874, Eighty-first Congress; 20 U.S.C. 238)."

An alternate way of achieving eligibility for assistance is prescribed under subsection 386(c)(2) of Public Law 102–484. To qualify, the LEA must satisfy subsection 386(b) and "by reason of consolidation or reorganization of local educational agencies be a successor of [an LEA] that for fiscal year 1992," was eligible to receive payments under DoD Instruction 1342.18, dated June 3, 1991 (32 CFR part 240, 56 FR 28821), and at least 30 percent (as rounded to the nearest whole percent) of its students in average daily attendance must be military dependent students as counted under subsection (a) or (b) of section 3 of Public Law 81–874, as amended, 20 U.S.C. 238.

Additionally, an LEA is eligible for assistance if its average daily attendance (ADA) of military dependent students increased by 15 percent or more from FY 1991 to FY 1993 as a result of the relocation or realignment of Armed Forces personnel and "at least 30 percent (as rounded to the nearest whole percent) of the students in average daily attendance in the schools of that agency in that fiscal year are military dependent students counted under subsection (a) or (b) of section 3 of the Act of September 30, 1950 (Public Law 874, Eighty-first Congress; 20 U.S.C. 238)."

For the purposes of this program, the following definitions are applicable:

(a) *Applicant.* Any LEA requesting assistance under this notice.

(b) *Current Expenditures.* "[E]xpenditures for free public education, including expenditures for administration, instruction, attendance and health services, pupil transportation services, operation and maintenance of plant, fixed charges, and expenditures to cover deficits for food services and student body activities. The term does not include expenditures for community services, capital outlay, debt service, or any expenditures made from funds granted for the purpose of chapter 1 and 2 of title I of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2701–2976). An expenditure for the replacement of equipment is considered to be either a current expenditure or capital outlay, whichever is in accordance with State accounting guidelines, law, or practice." 34 CFR 222.3.

(c) *DoD Contribution.* The amount of financial assistance an applicant shall receive under this notice.

(d) *Federal Property.* Real property that because of Federal law, agreement, or policy is exempt from taxation by a State or political subdivision of a State and that the United States owns in fee simple or leases from another party.

(e) *Local Education Agency (LEA).* A public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary or secondary schools in a city, county, township, school district, or other political subdivision of a State, or such combination of school districts or counties as are recognized in a State as an administrative agency for its public elementary or secondary schools. Such term includes any other public institution or agency having administrative control and direction of a public elementary or secondary school.

(f) *Military Dependent Student.* A student that is a dependent child of a member of the Armed Forces or a dependent child or a civilian employee of the Department of Defense.

(g) *Military Personnel.* Members of the Armed Forces serving on active duty.

(h) *Military 3(a) Student.* A child who attends the school(s) of a LEA that provides free public education and who, while attending such school(s) of the LEA, resides on Federal property and has a parent who is on active duty in the Armed Forces (as defined in section 101(4) of 10 U.S.C.).

(i) *Military 3(b) Student.* A child who attends the schools of a LEA provides a free public education and who, while attending such school(s), has a parent who is on active duty in the Armed Forces (as defined in 10 U.S.C. 101(4) but such child does not reside on Federal property.

(j) *Parent.* The biological father or mother of a child; a person who, by order of a court of competent jurisdiction, has been declared the father or mother of a child by adoption; the legal guardian of a child; or a person in whose household a child resides, provided that such person stands *in loco parentis* to that child and contributes at least one-half of the child's support.

(k) *Per-Pupil Expenditure (PPE).* The average current expenditure for an individual student.

The Department of Defense shall provide 50 million dollars to assist the LEAs that satisfy the requirements of this notice. This money shall be used only to supplement funding for the eligible LEAs operating schools that provide free public education to military dependent students for whom: (1) For the prior and current FYs, the LEA has applied for and received, or shall receive, financial assistance from all regular Federal and State educational aid programs available to it, including the Impact Aid Program (Pub. L. No. 81–874, section 3, as amended); (2) the eligibility of the LEA under State law for State aid for free public education and the amount of that aid are no different than the eligibility and amounts received by LEAs in that State without military dependent students; and (3) the LEA files with the Assistant Secretary of Defense for Force Management and Personnel (ASD (FM&P)) a letter of application (see Sample Letter at the end of this notice) and a copy of an independently audited financial report of the applicant LEA for the second preceding FY.

The eligible LEAs under this notice insofar as it implements subsection

386(c)(1) shall receive financial assistance for military dependent students. The eligible LEAs under this notice insofar as it implements subsection 386(c)(2) shall receive financial assistance only for military section 3(a) students. The eligible LEAs under this notice, insofar as it applies to those LEAs whose ADA of military dependent students increased by 15 percent or more from FY 1991 to FY 1993 as a result of the relocation or realignment of Armed Forces personnel, shall receive financial assistance for military dependent students. Applications for financial assistance must be received no later than July 30, 1993.

The amount of assistance (the DoD contribution) for the eligible LEAs under this notice may not exceed the amount derived from the following formula:

(1) Of the 50 million dollars available:

(i) Amounts of 30,115,385 dollars shall be obligated for military section 3(a) students to those eligible LEAs whose per-pupil expenditure (PPE) for the second preceding FY was less than the average PPE in the State for the second preceding FY.

(ii) Amounts of 2,509,615 dollars shall be obligated for military section 3(b) students and for those students who are the dependent children of civilian employees of the Department of Defense to those eligible LEAs, whose PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY.

(iii) Amounts of 10,038,462 dollars shall be obligated for military section 3(a) students to those eligible LEAs whose PPE for the second preceding FY year was equal to, or greater than the average PPE in the State for the second preceding FY.

(iv) Amounts of 836,538 dollars shall be obligated for military section 3(b) students and for those students who are the dependent children of civilian employees of the Department of Defense to those eligible LEAs whose PPE for the second preceding FY was equal to, or greater than the average PPE in the State for the second preceding FY.

(v) Amounts of 6,500,000 dollars shall be obligated to those eligible LEAs whose ADA of military dependent students increased by 15 percent or more from FY 1991 to FY 1993 as a result of the relocation or realignment of Armed Forces personnel.

(2) For military section 3(a) students in those eligible LEAs, whose average PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY, the LEA shall receive an amount, as follows:

(i) Equal to the LEA's military section 3(a) ADA for SY 1992–1993.

(ii) Multiplied by the quotient of the funds available to those LEAs, whose PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY (30,115,385 dollars).

(iii) Divided by the sum of the ADAs for SY 1992–1993 of military section 3(a) students of those same eligible LEAs.

(3) For military section 3(b) students and for those students who are the dependent children of civilian employees of the Department of Defense in those eligible LEAs whose average PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY, the LEA shall receive an amount, as follows:

(i) Equal to the LEA's military section 3(b) and dependent children of a civilian employee of the Department of Defense ADA for SY 1992–1993.

(ii) Multiplied by the quotient of the funds available to those LEAs whose PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY (2,509,615 dollars).

(iii) Divided by the sum of the ADAs for SY 1992–1993 of military section 3(b) and dependent children of civilian employees of the Department of Defense students of those same eligible LEAs.

(4) For military section 3(a) students in those eligible LEAs whose PPE for the second preceding FY year was equal to, or greater than the average PPE in the State for the second preceding FY, the LEA shall receive an amount, as follows:

(i) Equal to the LEA's military section 3(a) ADA for SY 1992—1993.

(ii) Multiplied by the quotient of the funds available to those LEAs whose PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY (10,038,462 dollars).

(iii) Divided by the sum of the ADAs for SY 1992—1993 of military section 3(a) students of those same eligible LEAs.

(5) For military section 3(b) students and for those students who are the dependent children of civilian employees of the Department of Defense in those eligible LEAs whose PPE for the second preceding FY year was equal to, or greater than the average PPE in the State for the second preceding FY, the LEA shall receive an amount, as follows:

(i) Equal to the LEA's military section 3(b) and dependent children of a civilian employee of the Department of Defense ADA for SY 1992—1993.

(ii) Multiplied by the quotient of the funds available to those LEAs whose PPE for the second preceding FY was less than the average PPE in the State for the second preceding FY (836,538 dollars).

(iii) Divided by the sum of the ADAs for SY 1992—1993 of military section 3(b) students and dependent children of civilian employees of the Department of Defense of those same eligible LEAs.

(6) For those military dependent students in those eligible LEAs whose ADA of military dependent students increased by 15 percent or more from FY 1991 to FY 1993 as a result of relocation or realignment of Armed Forces personnel, the LEA shall receive an amount, as follows:

(i) Equal to the LEA's military dependent student ADA for SY 1992—1993.

(ii) Multiplied by the quotient of the funds available to those LEAs (6,500,000 dollars).

(iii) Divided by the sum of the ADAs for SY 1992—1993 of military dependent students of those same LEAs.

The LEAs that have qualified for assistance under (1)(v) above shall not be eligible for additional assistance under (1) (i) through (iv) above.

The ASD (FM&P) shall calculate the proposed contribution. The contribution may be used for all students in the LEA, at the discretion of the appropriate officials in the LEA. The ASD (FM&P) shall ensure the implementation of these policies and procedures and provide assistance, as required, to the potentially eligible LEAs. The General Counsel of the Department of Defense shall provide legal advice for the implementation of this program.

An applicant requesting assistance under this notice shall submit a letter of application (see sample letter at end of this notice) and a copy of an independently audited financial report of the applicant LEA for the second preceding FY, requesting a DoD contribution and assuring the ASD (FM&P) that the LEA has applied for, has received or shall receive all financial assistance from other sources for which it is qualified. Letters of application must be addressed as follows:

Assistant Secretary of Defense, (Force Management and Personnel), Washington, DC 20301–4000.

The applicant shall also file a copy of the letter of application for financial assistance and required supportive information with the State educational agency (SEA). The SEA may submit comments on the LEA's application to the Department of Defense (at the above address) by August 20, 1993. Such comments shall be considered when

applications are reviewed by the OSD. The LEA's application and all required supporting information must reach the ASD (FM&P) no later than July 30, 1993.

Sample Letter of Application for Financial Assistance

Assistant Secretary of Defense (Force Management and Personnel), Washington, DC 20301–4000

Dear Mr./Ms. Assistant Secretary:

Pursuant to this "Notice of a Program for Providing Financial Assistance to LEAs," _____**Federal Register** _____(_____, 1993), the (name of the local educational agency (LEA)) requests financial assistance for the LEA for school year 1992—1993.

We certify that the LEA has applied for financial assistance from all sources, including the State/Commonwealth of (name). We understand that funds available for that purpose shall be paid on a per-pupil basis for military section 3(a) and military section 3(b) students and for those students who are the dependent children of civilian employees of the Department of Defense, as these terms are defined in the "Notice of a Program for Providing Financial Assistance to LEAs." Enclosed find a copy of our independent audit "(Title)" prepared by (name of firm or agency). We have submitted a complete and timely application for section 3 impact aid assistance to the Secretary of Education. A copy of this letter, with the above supporting information, is being submitted to the State educational agency.

Sincerely,

(Authorized LEA Official)

Dated: June 28, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15539 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

Defense Intelligence Agency

Membership of the DIA Performance Review Committee

AGENCY: Defense Intelligence Agency (DoD).

ACTION: Notice of membership of the DIA Performance Review Committee (PRC).

SUMMARY: This notice announces the appointment of the PRC of the Defense Intelligence Agency. The PRC's jurisdiction includes the entire Defense Intelligence Senior Executive Service (DISES). Publication of the PRC membership is required by 10 U.S.C. 1601(a)(4).

The PRC provides fair and impartial review of Defense Intelligence Senior Executive Service (DISES) performance appraisals and makes recommendations regarding performance, performance awards, and as applicable, recertification to the Director, Defense Intelligence Agency.

EFFECTIVE DATE: 1 July 1993.

FOR FURTHER INFORMATION CONTACT: Mr. Michael T. Curriden, Human,Resources Manager,Policy Division, Office for Human Resources, Defense Intelligence Agency (DAH–1), 3100 Clarendon Boulevard, Arlington, VA 22201–5322, (703) 284–1341.

Primary Members

Mr. Dennis M. Nagy, Deputy Director (Chairman)
Mr. A. Denis Clift, Chief of Staff
Ms. Dolores D. Greene, Associate Director for Estimates
Mr. John T. Berbrich, Director, National Military Intelligence Production Center
Mr. Jerry M. Magoulas, Deputy Director, National Military Intelligence Collection Center

Alternate Members

Mr. William J. Allard, General Counsel
Mr. John J. Sloan, Director for Policy Support
Mr. Martin Hurwitz, Director for Information Services
Ms. Margaret R. Munson, Director for Administration

Dated: June 28, 1993.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 93–15538 Filed 6–30–93; 8:45 am]

BILLING CODE 5000–04–M

Department of the Navy

Titanium Metals Corp.; Intent To Grant Exclusive Patent License

AGENCY: Department of the Navy, DoD.

ACTION: Intent to grant exclusive patent license; Titanium Metals Corporation.

SUMMARY: The Department of the Navy hereby gives notice of its intent to grant to Titanium Metals Corporation a revocable, nonassignable, exclusive license in the United States and certain foreign countries to practice the invention described in U.S. Patent Application Serial No. 08/018,394 entitled Titanium Alloy For Plate Applications, filed February 17, 1993 in which the Government owns an undivided interest.

Anyone wishing to object to the grant of this license has 60 days from the date of this notice to file written objections along with supporting evidence, if any. Written objections are to be filed with the Chief of Naval Research (Code 1230), Ballston Tower One, Arlington, Virginia 22217–5660.

DATES: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. R.J. Erickson, Staff Patent Attorney, Chief of Naval Research (Code 1230), Ballston Tower One, 800 North Quincy Street, Arlington, Virginia 22217–5660, telephone (703) 696–4001.

Dated: June 22, 1993.

Michael P. Rummel,

LCDR, JAGC, USN, Federal Register Liaison Officer.

[FR Doc. 93–15457 Filed 6–30–93; 8:45 am]

BILLING CODE 3810–AE–M

Government-Owned Inventions; Availability for Licensing

AGENCY: Department of the Navy, DOD.

ACTION: Notice of availability of inventions for licensing.

SUMMARY: The inventions listed below are assigned to the United States Government as represented by the Secretary of the Navy and are made available for licensing by the Department of the Navy.

Copies of the patents cited are available from Commissioner of Patents and Trademarks, Washington, DC 20231 for $3.00 each. Requests for copies of patents must include the patent number.

DATES: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. R.J. Erickson, Staff Patent Attorney, Office of Naval Research (Code 1230), 800 North Quincy Street, Arlington, Virginia 22217–5660, telephone (703) 696–4001.

Patent 4,923,402: Marksmanship Expert Trainer, filed 25 November 1988, patented 8 May 1990;

Patent 5,215,463: Disappearing Target, filed 5 November 1991; patented 1 June 1993;

Patent 5,215,465; Infrared Spot Tracker, filed 5 November 1991; patented 1 June 1993; and

Patent 5,213,503: Team Trainer, filed 5 November 1991; patented 25 May 1993.

Dated: June 19, 1993.

Michael P. Rummel,

LCDR, JAGC, USN, Federal Register Liaison Officer.

[FR Doc. 93–15458 Filed 6–30–93; 8:45 am]

BILLING CODE 3810–AE–M

Government-Owned Inventions; Availability for Licensing

AGENCY: Department of the Navy, DOD.

ACTION: Notice of availability of inventions for licensing.

SUMMARY: The inventions listed below are assigned to the United States Government as represented by the

Secretary of the Navy and are made available for licensing by the Department of the Navy.

Copies of the patents cited are available from Commissioner of Patents and Trademarks, Washington, DC 20231 for $3.00 each. Requests for copies of patents must include the patent number.

DATES: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. R.J. Erickson, Staff Patent Attorney, Office of Naval Research (Code 1230), 800 North Quincy Street, Arlington, Virginia 22217–5660, telephone (703) 696–4001.

Patent 5,130,251: Stress-Resistant Bioluminescent Dinoflagellates, filed 3 September 1991; patented 14 July 1992, and

Patent 5,192,667: Method for Evaluating Anti-Fouling Paints; field 15 August 1989; patented 9 March 1993.

Dated: June 22, 1993.

Michael P. Rummel,

LCDR, JAGC, USN, Federal Register Liaison Officer.

[FR Doc. 93–15463 Filed 6–30–93; 8:45 am]

BILLING CODE 3810–AE–M

Etrema Products, Inc.; Intent To Grant Exclusive Patent License

AGENCY: Department of the Navy, DOD.

ACTION: Intent to grant exclusive patent license; Etrema Products, Inc., a wholly owned subsidiary of Edge Technologies, Inc.

SUMMARY: The Department of the Navy hereby gives notice of its intent to grant to Etrema Products, Inc., a wholly owned subsidiary of Edge Technologies, Inc., a revocable, nonassignable, exclusive license in the United States to practice the Government-owned invention described in U.S. Patent No. 4,378,258 entitled "Rare Earth-Iron Magnetostrictive Materials and Device Using These Materials".

Anyone wishing to object to the grant of this license has 60 days from the date of this notice to file written objections along with supporting evidence, if any. Written objections are to be filed with the Chief of Naval Research (Code 1230), Ballston Tower One, Arlington, Virginia 22217–5660.

DATES: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. R.J. Erickson, Staff Patent Attorney, Chief of Naval Research (Code 1230), Ballston Tower One, 800 North Quincy Street, Arlington, Virginia 22217–5660, telephone (703) 696–4001.

Dated: June 22, 1993.

Michael P. Rummel,

LCDR, JAGC, USN, Federal Register Liaison Officer.

[FR Doc. 93–15459 Filed 6–30–93; 8:45 am]

BILLING CODE 3810–AE–M

DEPARTMENT OF ENERGY

Nevada Operations Office; Implementation of Noncompetitive Financial Assistance

AGENCY: Department of Energy, Nevada Operations Office (DOE/NV)

ACTION: Notice of noncompetitive financial assistance.

SUMMARY: DOE announces that pursuant to the DOE Financial Assistance Rules, 10 CFR 600.7(b)(2), it is awarding a noncompetitive financial assistance grant to Community College Southern Nevada, Las Vegas for the Environmental Restoration Technologies Program.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Energy, Nevada Operations Office, ATTN: Rudy Cruz, P.O. Box 98518, Las Vegas, NV 89193–8518.

SUPPLEMENTARY INFORMATION: This award will provide financial support to the Environmental Restoration Technologies Program, Community College of Southern Nevada, Las Vegas.

The Environmental Restoration Technologies Program has quickly grown from zero students 2 years ago to over 200 in the current semester. The financial assistance will allow the program to hire another full-time faculty member, provide environmental technologies training, and the necessary budget to support degree granting status for the program. Students enrolled in this program will become the first part of a planned 2+2 environmental studies transfer program, 2 years at the Community College and 2 years at the University of Nevada, Las Vegas.

Eligibility for the award of this grant is being limited to the Community College of Southern Nevada, Las Vegas because of the unique program to further help develop an academic program that will train technicians, and also prepare environmental science majors for the environmental restoration and waste management missions at the Nevada Test Site.

The project period of this grant is for two years and will commence on July 1, 1993, through June 30, 1995. The total estimated cost of this award is $130,482.

Issued in Las Vegas, Nevada, on June 15, 1993.

Nick C. Aquilina,

Manager, DOE Nevada Operations Office.

[FR Doc. 93–15587 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Pittsburgh Energy Technology Center; Noncompetitive Financial Assistance Award

AGENCY: Metairie Site Office and Pittsburgh Energy Technology Center, Department of Energy.

ACTION: Determination of noncompetitive financial assistance (Grant) award with Michigan State University.

SUMMARY: The U.S. Department of Energy (DOE), Metairie Site Office (MSO), announces that pursuant to 10 CFR 600.7 (b)(2)(i) criteria (B), it intends to award a Grant through the Pittsburgh Energy Technology Center (PETC) to Michigan State University for the participation in a Hydrocyclone Development Consortium.

ADDRESSES: Department of Energy, Pittsburgh Energy Technology Center, Acquisition and Assistance Division, P.O. Box 10940, MS 921–118, Pittsburgh, PA 15236.

FOR FURTHER INFORMATION CONTACT: Karen S. Olean, Contract Specialist, (412) 892–6202.

SUPPLEMENTARY INFORMATION:

Grant No.

DE–FG22–93MT93002

Title of Research Effort

"Participation in a Hydrocyclone Development Consortium"

Awardee

Michigan State University

Term of Assistance Effort

Twelve (12) months

Cost of Assistance Effort

The total estimated value is $75,000.00.

Objective

The objective of this research, development, and technology transfer project is to enable DOE participation via Michigan State University in a multiple team of University, Industrial, and Government Researchers, organized as the Hydrocyclone Development Consortium (HDC). This grant award not only provides a timely mechanism to transfer the results of basic research into useful commercial products, but it also allows the user of the technology to

guide the development in order to meet the specific needs of oil/water cleanup.

Michigan State University has initiated a project designed to further develop a new class of hydrocyclones designed to remove a 'light' dispersed phase from a 'heavy' continuous phase in the removal of dispersed oil from water. A commercial prototype of the new concept described in U.S. Patent 4,855,066 is being developed and tested for cleaning oily water under conditions similar to actual field conditions.

This improved technology for de-oiling water on offshore platforms and elsewhere, provides a design to remove small amounts of dispersed oil (<3,000 wppm) from water. This compact hydrocyclone oil/water separator should be capable of meeting current and future environmental standards for discharge of production water into the ocean. Potential applications include cleaning oily water on offshore platforms, bilge and ballast water on ocean vessels, and other waste streams.

Current members of the hydrocyclone Development Consortium have funded approximately $675,000 to date for this research project over the last two years. This DOE grant award would provide Michigan State University with assistance for performance of the last year of this project.

In accordance with 10 CFR 600.7 (b)(2)(i) criteria (B), a noncompetitive Financial Assistance Award (Grant) to Michigan State University has been justified. This effort would be conducted by Michigan State University using their own resources and those of the Hydrocyclone Consortium; however, DOE support of the activity would enhance public benefits to be derived by allowing this research to be completed and the results transferred to the public. DOE knows of no other entity which is conducting or planning to conduct such an effort. This effort is considered suitable for noncompetitive financial assistance and would not be eligible for financial assistance under a solicitation, and a competitive solicitation would be inappropriate.

Dated: June 2, 1993.

Dale A. Siciliano,

Contracting Officer.

[FR Doc. 93–15589 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Nevada Operations Office; Implementation of Noncompetitive Financial Assistance

AGENCY: Nevada Operations Office, Department of Energy (DOE/NV).

ACTION: Notice of noncompetitive financial assistance.

SUMMARY: DOE announces that pursuant to the DOE Financial Assistance Rules, 10 CFR 600.7(b)(2), it is awarding a noncompetitive financial assistance grant for the establishment of an Environmental Studies Cooperative Education Center at University of Nevada, Las Vegas.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Energy, Nevada Operations Office, ATTN: Rudy Cruz, P.O. Box 98518, Las Vegas, NV 89193–8518.

SUPPLEMENTARY INFORMATION: This award will provide financial support to the Environmental Studies Cooperative Education Center, at University of Nevada, Las Vegas in order to establish an Environmental Studies Cooperative Education Center. The Center is an extension of a very successful Environmental Studies Program that started 2 years ago with financial assistance from DOE/NV. This center will build upon the success of the students enrolled in the University and will help establish the first linkage in a planned 2+2 transfer program (2 years at the Community College of Southern Nevada and 2 years at University of Nevada, Las Vegas) with the Environmental Restoration Technology Program at the Community College of Southern Nevada.

This financial assistance award is a unique opportunity to further develop an academic program that will contribute to the environmental restoration and a waste management mission at the Nevada Test Site. Furthermore, the articulation agreement and work the University of Nevada, Las Vegas has undertaken with the Community College of Southern Nevada will help ensure that the Department has sufficient numbers of environmental scientists and technicians to restore the contaminated areas of Nevada Test Site.

Eligibility for the award of this grant is being limited to the University of Nevada, Las Vegas because of the uniqueness of the Environmental Studies Program at the University.

The project period of this grant is for 2 years and will commence on July 1, 1993, through June 30, 1995. The total estimated cost of this award is $196,000.

Issued in Las Vegas, Nevada, on June 15, 1993.

Nick C. Aquilina

Manager, DOE Nevada Operations Office.

[FR Doc. 93–15588 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

San Francisco Operations Office; Laser Fusion Research; Financial Assistance Award (Grant)

AGENCY: Department of Energy (DOE).

ACTION: Grant solicitation announcement for laser fusion research applications.

SUMMARY: The U.S. Department of Energy (DOE) San Francisco Operations Office (SF) announces its plan to conduct a technically competitive solicitation for basic research experiments in high energy density studies at the National Laser User's Facility (NLUF) located at the University of Rochester/Laboratory for Laser Energetics (UR/LLE). Universities or other higher education institutions, private sector non-for-profit organizations, or other entities are invited to submit grant applications. The total amount of funding expected to be available for the Fiscal Year 1993 (FY93) cycle of this program is $700,000. It is anticipated that multiple grants will be awarded within the available funding.

GRANT SOLICITATION NUMBER: DE–PS03–93SF19241.

The actual work to be accomplished will be determined by the experiments and diagnostic techniques that are selected for award. Proposed experiments and diagnostic techniques will be evaluated through scientific peer review against predetermined, published and available criteria. Final selection will be made by the DOE.

The unique resources of the NLUF are available to scientists for state-of-the-art experiments primarily in the area of inertial fusion and related plasma physics. Other areas such as spectroscopy of high ionized atoms, laboratory astrophysics, fundamental physics, materials science and biology and chemistry will be considered on a secondary basis.

The LLE was established in 1970 to investigate the interaction of high power lasers with matter. Currently available at the LLE for NLUF researchers is the Glass Development Laser (GDL), a 250 billion watt, single beam prototype for the OMEGA laser. The system is suitable for a variety of experiments including laser-plasma interactions and atomic spectroscopy. The NLUF Program for FY93 is to concentrate on experiments that can be done with the GDL laser at the University of Rochester and development of diagnostic techniques suitable for the OMEGA Upgrade system. The upgrade of the OMEGA laser is scheduled for completion in March of 1995. (The OMEGA laser is currently off-line while

construction is underway.) The OMEGA Upgrade laser system will be a 30 kJ UV laser system suitable for direct-drive ICF implosions. Measurements of the laser coupling, laser-plasma interaction, core temperature and core density are needed to determine the characteristics of the target implosion. Diagnostic techniques could include either new instrumentation development of analysis tools, or development of targets that are applicable for 30 kJ direct-drive implosions.

More technical information about the facilities and potential collaboration at NLUF can be obtained from: Dr. James Knauer, Manager, National Laser User's Facility, University of Rochester/LLE 250 East River Road, Rochester, NY 14623.

The solicitation document contains all the information relative to this acquisition for prospective applicants to this acquisition for prospective applicants. The solicitation is targeted for release in late June, 1993. Recipients of the NLUF solicitation during the last [FY92] NLUF solicitation will automatically receive a copy of the FY93 solicitation. New interested parties can obtain copies of the solicitation documents by submitting a written request to: Lee Renna, U.S. Department of Energy, San Francisco Operations Office, 1301 Clay Street, room 700N, Oakland, CA 94612–5208. (510) 637–1887.

Issued in Oakland, CA, June 9, 1993.

Joan Macrusky,

Branch Chief, ER/DP/EM.

[FR Doc. 93–15590 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Nevada Operations Office; Implementation of Noncompetitive Financial Assistance

AGENCY: Nevada Operations Office, Department of Energy, (DOE/NV).

ACTION: Notice of noncompetitive financial assistance.

SUMMARY: DOE/NV announces that pursuant to the DOE Financial Assistance Rules, 10 CFR 600.7(b)(2), it is awarding a noncompetitive financial assistance cooperative agreement for a research program to be conducted at the Thermoluminescence (TL) Laboratory of the University of Utah on the development of optically stimulated luminescence, imaging TL spectrometry, and electron spin resonance techniques for accident and environmental dosimetry.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Energy, Nevada Operations Office, ATTN: David L. Wheeler, P.O. Box 98518, Las Vegas, NV 89193–8518.

SUPPLEMENTARY INFORMATION: This award is a renewal of an existing award to support the operations of the TL Laboratory and the development of new techniques for analysis of environmental materials which will expand the capability for rapid, accurate measurement of radiation dose delivered in accident situations. The optically Stimulated Luminescence technique is similar to TL spectrometry but uses photo rather than thermal stimulation. Recent results from the research laboratory indicated that, in fired quartz, doses as low as one rad can be measured. Development of this technique will enable the University to analyze ceramics and bricks containing feldspar crystals that cannot be analyzed using the TL technique. It will also be used in evaluating biological samples. Imaging TL Spectrometry addresses the problems of grain heterogeneity by providing single-grain imaging of TL samples. This technique provides a method by which grains of similar properties may be sorted using computer images to improve the signal output and speed up sample preparation. Development of this capability has facilitated the laboratory's capability for emergency response to a radiological accident.

The electron spin resonance technique will be used to examine dose measuring capabilities of biological materials such as bone and tooth enamel. Additional techniques will be investigated using low temperature traps in non-fired materials such as asphalt, sand, and concrete. This will permit early-time dosimetry following an accident in almost any location. Other applications are also possible to provide a greater public benefit.

Eligibility for the award of this cooperative agreement is being limited to the University of Utah because the TL Laboratory at the University is the only laboratory in the United States that is capable of doing this kind of work.

The renewal of this cooperative agreement is for 3 years and will commence on July 1, 1993, and end on June 30, 1996. The total estimated cost of this award is $1.15 million.

Issued in Las Vegas, Nevada, on June 11, 1993.

Nick C. Aquilina,

Manager, DOE Nevada Operations Office.

[FR Doc. 93–15591 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Office of Arms Control and Nonproliferation

Proposed Subsequent Arrangement

Pursuant to section 131 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2160), notice is hereby given of a proposed "subsequent arrangement" under the Agreement for Cooperation between the Government of the United States of America and the Government of Sweden concerning Peaceful Uses of Nuclear Energy, and the Additional Agreement for Cooperation between the Government of the United States of America and the European Atomic Energy Community (EURATOM) concerning Peaceful Uses of Atomic Energy, as amended.

The subsequent arrangement to be carried out under the above-mentioned agreements involves approval for the following retransfer: RTD/SW(EU)–156, for the transfer of 48 fuel assemblies from France to Sweden containing 21,815.676 kilograms of uranium containing 735.866 kilograms of uranium-235 (3.60 percent enrichment) for use as fuel in the Ringhals 4 power reactor.

In accordance with section 131 of the Atomic Energy Act of 1954, as amended, it has been determined that this subsequent arrangement will not be inimical to the common defense and security.

This subsequent arrangement will take effect no sooner than fifteen days after the date of publication of this notice.

Issued in Washington, DC on June 24, 1993.

Edward T. Fei,

Acting Director, Office of Nonproliferation Policy.

[FR Doc. 93–15586 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Energy Information Administration

Agency Information Collections Under Review by the Office of Management and Budget

AGENCY: Energy Information Administration, DOE.

ACTION: Notice of request submitted for review by the Office of Management and Budget.

SUMMARY: The Energy Information Administration (EIA) has submitted the energy information collection(s) listed at the end of this notice to the Office of Management and Budget (OMB) for review under provisions of the Paperwork Reduction Act (Pub. L. 96–511, 44 U.S.C. 3501 *et seq.*). The listing

does not include collections of information contained in new or revised regulations which are to be submitted under section 3504(h) of the Paperwork Reduction Act, nor management and procurement assistance requirements collected by the Department of Energy (DOE).

Each entry contains the following information: (1) The sponsor of the collection; (2) Collection number(s); (3) Current OMB docket number (if applicable); (4) Collection title; (5) Type of request, e.g., new, revision, extension, or reinstatement; (6) Frequency of collection; (7) Response obligation, i.e., mandatory, voluntary, or required to obtain or retain benefit; (8) Affected public; (9) An estimate of the number of respondents per report period; (10) An estimate of the number of responses per respondent annually; (11) An estimate of the average hours per response; (12) The estimated total annual respondent burden; and (13) A brief abstract describing the proposed collection and the respondents.

DATES: Comments must be filed within 30 days of publication of this notice. If you anticipate that you will be submitting comments but find it difficult to do so within the time allowed by this notice, you should advise the OMB DOE Desk Officer listed below of your intention to do so, as soon as possible. The Desk Officer may be telephoned at (202) 395–3084. (Also, please notify the EIA contact listed below.)

ADDRESSES: Address comments to the Department of Energy Desk Officer, Office of Information and Regulatory Affairs, Office of Management and Budget, 726 Jackson Place, NW., Washington, DC 20503. (Comments should also be addressed to the Office of Statistical Standards at the address below.)

FOR FURTHER INFORMATION AND COPIES OF RELEVANT MATERIALS CONTACT: Jay Casselberry, Office of Statistical Standards, (EI–73), Forrestal Building, U.S. Department of Energy, Washington, DC 20585. Mr. Casselberry may be telephoned at (202) 254–5348.

SUPPLEMENTARY INFORMATION: The energy information collection submitted to OMB for review was:

1. Federal Energy Regulatory Commission.
2. FERC–567
3. 1902–0005
4. Gas Pipeline Certificates: Annual Reports of System Flow Diagrams and System Capacity
5. Extension
6. Annually
7. Mandatory
8. Businesses or other for-profit
9. 101 respondents
10. 1.366 responses
11. 85.12 hours per response
12. 11,747 hours
13. The Commission uses FERC–567 to process rate and certificate applications; to analyze transportation and depreciation of property costs; to analyze impacts of market expansions of facilities; to review and establish rates of depreciation for the facilities used in the production and transportation of natural gas; and to establish and enforce curtailment rules.

Statutory Authority: Section 2(a) of the Paperwork Reduction Act of 1980, (Pub. L. No. 96–511), which amended Chapter 35 of Title 44 United States Code (See 44 U.S.C. 3506 (a) and (c)(1)).

Issued in Washington, DC, June 24, 1993.

Yvonne M. Bishop,

Director, Statistical Standards, Energy Information Administration.

[FR Doc. 93–15595 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–M

Federal Energy Regulatory Commission

[Docket Nos. QF89–7–002, et al.]

Brush Cogeneration Partners, et al., Electric Rate, Small Power Production, and Interlocking Directorate Filings

June 25, 1993.

Take notice that the following filings have been made with the Commission:

1. Brush Cogeneration Partners

[Docket No. QF89–7–002]

On June 22, 1993, Brush Cogeneration Partners tendered for filing a supplement to its filing in this docket.

The supplement pertains to the ownership structure and technical aspects of its cogeneration facility. No determination has been made that the submittal constitutes a complete filing.

Comment date: July 13, 1993, in accordance with Standard Paragraph E at the end of this notice.

2. Iowa-Illinois Gas and Electric Company

[Docket No. ES93–42–000]

Take notice that on June 18, 1993, Iowa-Illinois Gas and Electric Company filed an application under § 204 of the Federal Power Act requesting authorization to issue not more than $100 million of unsecured short-term debt on or before June 30, 1995, with a final maturity date no later than June 30, 1996.

Comment date: July 16, 1993, in accordance with Standard Paragraph E at the end of this notice.

3. Georgia-Pacific Corp.

[Docket No. QF93–115–000]

On June 21, 1993, Georgia-Pacific Corporation of 133 Peachtree Street, NE., Atlanta, Georgia 30303, submitted for filing an application for certification of a facility as a qualifying small power production facility pursuant to Section 292.207(b) of the Commission's Regulations. No determination has been made that the submittal constitutes a complete filing.

According to the applicant, the 25 MW small power production facility is located at Mill Street, Woodland, Maine. The facility consists of the #3 recovery boiler, and the #10 and #11 steam turbine generators. The primary energy source of the facility is biomass in the form of black liquor. The #3 recovery boiler was placed into service in July 1989. Installation of the steam turbine generators were completed in 1966 and 1970 respectively.

Comment date: August 2, 1993, in accordance with Standard Paragraph E at the end of this notice.

4. Georgia-Pacific Corp.

[Docket No. QF93–113–000]

On June 21, 1993, Georgia-Pacific Corporation of 133 Peachtree Street, NE., Atlanta, Georgia 30303, submitted for filing an application for certification of a facility as a qualifying small power production facility pursuant to section 292.207(b) of the Commission's Regulations. No determination has been made that the submittal constitutes a complete filing.

According to the applicant, the 13 MW small power production facility is located at Market Street, Nekoosa, Wisconsin. The facility consists of the #14 recovery boiler and the associated steam turbine generator. The primary energy source of the facility is biomass in the form of black liquor. Construction of the facility was completed in 1991.

Comment date: August 2, 1993, in accordance with Standard Paragraph E at the end of this notice.

5. Georgia-Pacific Corp.

[Docket No. QF93–114–000]

On June 21, 1993, Georgia-Pacific Corporation of 133 Peachtree Street, NE., Atlanta, Georgia 30303, submitted for filing an application for certification of a facility as a qualifying small power production facility pursuant to Section 292.207(b) of the Commission's Regulations. No determination has been made that the submittal constitutes a complete filing.

According to the applicant, the 53 MW small power production facility is located at Georgia Highway 273 W.,

Cedar Springs, Georgia. The facility consists of the #1, #2 and #3 recovery boilers, and the No. 1 and No. 2 steam turbine generators. The primary energy source of the facility is biomass in the form of black liquor. Installation of the #1, #2 and #3 recovery boilers were completed in 1936, and 1974 respectively.

Comment date: August 2, 1993, in accordance with Standard Paragraph E at the end of this notice.

6. Georgia-Pacific Corp.

[Docket No. QF93-116-000]

On June 21, 1993, Georgia-Pacific Corporation of 133 Peachtree Street, NE., Atlanta, Georgia 30303, submitted for filing an application for certification of a facility as a qualifying small power production facility pursuant to Section 292.207(b) of the Commission's Regulations. No determination has been made that the submittal constitutes a complete filing.

According to the applicant, the 60 MW small power production facility is located at Buck Creek Road, New Augusta, Mississippi. The facility consists of a recovery boiler, a power boiler and two steam turbine generators. The primary energy source of the facility is biomass in the form of black liquor and tree bark. Operation of the facility began in 1984.

Comment date: August 2, 1993, in accordance with Standard Paragraph E at the end of this notice.

Standard Paragraphs

E. Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). All such motions or protests should be filed on or before the comment date. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 93-15482 Filed 6-30-93; 8:45 am]

BILLING CODE 6717-01-M

[Docket Nos. CP93-493-000, et al.]

Ozark Gas Transmission System, et al., Natural Gas Vertificate Filings

June 25, 1993.

Take notice that the following filings have been made with the Commission:

1. Ozark Gas Transmission System

[Docket No. CP-93-493-000 CP93-493-001]

Take notice that on June 14, 1993, Ozark Gas Transmission System (Ozark), 1700 Pacific Avenue, Dallas, Texas 75201, filed in Docket No. CP93-493-000 an application, as amended on June 24, 1993, pursuant to section 7(c) of the Natural Gas Act for authorization to construct and operate a new compressor station, all as more fully set forth in the application on file with the Commission and open to public inspection.

Ozark proposes to install the Del Soto Compressor Station on its main line near Altus, in Franklin County, Arkansas, to receive natural gas from Arkansas Western Gas Company (AWG). Ozark states that the new station would be located adjacent to its existing 4-inch receipt meter station and also adjacent to AWG's Noah Davis Compressor Station. Ozark requests authorization to relocate a compressor from the Walker Compressor Station (Walker) to the proposed station, stating that the compressor would be abandoned at Walker under its blanket authorization. Ozark states that the station would contain the single relocated 300-horsepower reciprocating compressor that has a throughput capacity of 5 MMcf per day, based on 350 psig suction and 900 psig discharge pressures.

Ozark explains that these facilities would provide Ozark's shippers with an additional gas supply from which to market and/or transport natural gas. Ozark estimates that it would cost $69,600 to construct the proposed facilities, to be financed with equity funds.

Comment date: July 16, 1993, in accordance with Standard Paragraph F at the end of the notice.

2. Panhandle Eastern Pipe Line Co.

[Docket No. CP93-505-000]

Take notice that on June 22, 1993, Panhandle Eastern Pipe Line Company (Panhandle), P.O. Box 1642, Houston, Texas 77251-1642, filed in Docket No. CP93-505-000 an application pursuant to section 7(b) of the Natural Gas Act for permission and approval to abandon a natural gas transmission pipeline segment and other facilities by transfer to Panhandle Gathering Company (PGC), all as more fully set forth in the application on file with the Commission and open to public inspection.

Panhandle proposes to abandon certain facilities by transfer to PGC, as a contribution to the capital of PGC. It is stated that Panhandle is the sole shareholder of PGC. Panhandle states that PGC and Western Gas Resources, Inc. (WGR), have entered into an agreement to form a PGC-WGR Joint Venture (PGC-WGR) which, upon the Commission's approval of the proposed abandonment, would operate the facilities "behind-the-plant" as part of a non-regulated gathering and processing system.[1] Panhandle states that the original cost of the facilities is $38.5 million, and after allowances for depreciation, the net book value is $8.2 million.

More specifically, Panhandle proposes to abandon the following facilities.

- *A 19.4 mile segment of Panhandle's Elk City 24-inch transmission pipeline.* Panhandle states that the line segment extends from its Alva compressor station to its 2 Gate south of the Cimarron River, located in Major and Woods Counties, Oklahoma. Panhandle further states that the segment parallels a remaining 30-inch line loop which is capable of handling current and anticipated gas flow on the Elk City line. Panhandle advises that PGC-WGR would use the line segment to move gas to WGR's Chaney Dell Plant for processing.
- *The Canton/N.E. Seiling Gathering System.* Panhandle states that the system is comprised of approximately 90 miles of 4 to 10 inch gathering lines and two booster stations totaling 4,350 horsepower (six low suction pressure compressors), and is located in Blaine, Dewey, Woodward and Major Counties, Oklahoma. Panhandle advises that the N.E. Seiling booster station (two compressors) would be retired from service upon abandonment since the gathering lines to which it is connected would be rerouted to deliver gas to the Chester Processing Plant.
- *The Waynoka Gathering System.* Panhandle states that the system is comprised of approximately 270 miles of gathering lines (4 to 12 inches in size) and five booster stations (6,437 horsepower of small, low suction pressure compression), and is located in Woods, Woodward and Alfalfa Counties, Oklahoma. Panhandle advises that the booster station and the lines connected to it would be reconfigured to

[1] PGC filed in Docket No. CP-93-506-000 a petition for declaratory order disclaiming jurisdiction over the facilities it would acquire.

enable the gathering of gas for delivery to the Chaney Dell Processing Plant.

• *The Avard Gathering System.* Panhandle states that the system is comprised of approximately 80 miles of gathering lines (from 4 to 8 inches in size) and two booster stations (1,016 horsepower of small, low suction pressure compression) and is located in Woods and Alfalfa Counties, Oklahoma, and Barber County, Kansas. Panhandle advises that the booster stations would perform a behind-the-plant gathering function comparable to that of the Waynoka booster station.

Panhandle states that, with the advent of the restructuring mandated by the Commission in Order No. 636, *et seq.*, it no longer requires the facilities. Panhandle further states that divesting itself of these facilities would facilitate the continued flow of natural gas into Panhandle's main lines due to their reconfiguration as part of a non-regulated, low pressure system for gas to be processed. Panhandle also states that the divestiture would mitigate the potential for stranded investment and the resulting Order No. 636 transition costs.

Comment date: July 16, 1993, in accordance with Standard Paragraph F at the end of this notice.

3. El Paso Natural Gas Co.

[Docket No. CP93–508–000]

Take notice that on June 22, 1993, El Paso Natural Gas Company (El Paso), Post Office Box 1492, El Paso, Texas 79978, filed in Docket No. CP93–508–000 an application pursuant to section 7(b) of the Natural Gas Act for authorization to abandon five certificated gas transportation services, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

El Paso requests authorization to abandon the following certificated transportation services: (1) Rate Schedule T–37 with Caprock Pipeline Company; (2) Rate Schedule T–38 with Mountain Industrial Gas Company on behalf of Cominco American Incorporated; (3) Rate Schedule T–8 with Southwest Gas Corporation (Southwest); (4) Rate Schedule T–15 with Southwest; and (5) Rate Schedule T–22 with Texas Gas Transmission Corporation. El Paso states that all of the above-mentioned rate schedules are on file as part of El Paso's FERC Gas Tariff, Third Revised Volume No. 2. El Paso requests an effective date on March 1, 1993, for the first four listed services and an effective date of April 1, 1993, for the service for Texas Gas.

El Paso reports that its transition from a gas merchant to an open-access transporter of natural gas has prompted El Paso and its customers to address, among other things, gas purchase relationships with producers and the need to continue traditional section 7(c) certificated transportation and exchange services. As a result, El Paso and the parties to the services proposed to be abandoned have signed letter agreements providing that these case-specific, certificated transportation services should be terminated. El Paso indicates that, if requested, it would continue transportation services for these parties under subpart G of part 284 of the Regulations.

El Paso avers that it would continue to operate all of the related facilities to the extent necessary to provide part 284, subpart G transportation services. El Paso also indicates that all of the services to be abandoned are free of any imbalances.

Comment date: July 16, 1993, in accordance with Standard Paragraph F at the end of this notice.

Standard Paragraphs

F. Any person desiring to be heard or make any protest with reference to said filing should on or before the comment date file with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, a motion to intervene or a protest in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) and the Regulations under the Natural Gas Act (18 CFR 157.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a motion to intervene in accordance with the Commission's Rules.

Take further notice that, pursuant to the authority contained in and subject to jurisdiction conferred upon the Federal Energy Regulatory Commission by sections 7 and 15 of the Natural Gas Act and the Commissions' Rules of Practice and Procedure, a hearing will be held without further notice before the Commission or its designee on this filing if no motion to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a motion for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for the applicant to appear or be represented at the hearing.

Lois D. Cashell,

Secretary.

[FR Doc. 93–15483 Filed 6–30–93; 8:45 am]

BILLING CODE 6717–01–M

[Docket No. JD93–11510T Texas–142]

State of Texas; NGPA Notice of Determination by Jurisdictional Agency Designating Tight Formation

June 25, 1993

Take notice that on June 21, 1993, the Railroad Commission of Texas (Texas) submitted the above-referenced notice of determination pursuant to section 271.703(c)(3) of the Commission's regulations, that the Wilcox Formation, East 76 (Wilcox 8,900 Sand), underlying Duval County, Texas, qualifies as a tight formation under section 107(b) of the Natural Gas Policy Act of 1978. The designated area is in Railroad Commission District No. 4 and consists of approximately 3,680 acres in all or portions of the following surveys:

Survey	Abstract No.	Acres
J. Poitevent	A–433	640
J. Poitevent	A–432	640
V.R. Guffy	A–2039	320
E. Rodriguez	A–1881	160
J. Poitevent	A–431	640
J. Poitevent	A–430	640
J. Poitevent	A–405	640

The notice of determination also contains Texas' findings that the referenced portion of the Wilcox Formation meets the requirements of the Commission's regulations set forth in 18 CFR part 271.

The application for determination is available for inspection, except for material which is confidential under 18 CFR 275.206, at the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington DC 20426. Persons objecting to the determination may file a protest, in accordance with 18 CFR 275.203 and 275.204, within 20 days after the date this notice is issued by the Commission.

Lois D. Cashell,

Secretary.

[FR Doc. 93–15487 Filed 6–30–93; 8:45 am]

BILLING CODE 6717–01–M

[Docket No. JD93-11509T New Mexico-42]

United States Department of the Interior, Bureau of Land Management; NGPA Notice of Determination by Jurisdictional Agency Designating Tight Formation

June 25, 1993.

Take notice that on June 21, 1993, the United States Department of the Interior's Bureau of Land Management (BLM) submitted the above-referenced notice of determination pursuant to section 271.703(c)(3) of the Commission's regulations, that the Gallup and Dakota Formations in a portion of the Northeast Ojito Gallup-Dakota Pool underlying a portion of Rio Arriba County, New Mexico, qualify as a tight formation under section 107(b) of the Natural Gas Policy Act of 1978. The area of application covers approximately 4,000 acres, all of which are Jicarilla Apache Indian Reservation Lands. The recommended area is described as follows:

Township 26 North, range 3 West

Section 22: SE/4
Sections 23-24: S/2
Sections 25-26: All
Sections 27 and 34: E/2
Sections 35-36: All

The notice of determination also contains BLM's findings that the referenced portion of the Gallup and Dakota Formations meets the requirements of the Commission's regulations set forth in 18 CFR part 271.

The application for determination is available for inspection, except for material which is confidential under 18 CFR 275.206, at the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426. Persons objecting to the determination may file a protest, in accordance with 18 CFR 275.203 and 275.204, within 20 days after the date this notice is issued by the Commission.

Lois D. Cashell,

Secretary.

[FR Doc. 93-15488 Filed 6-30-93; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. CP93-511-000]

CNG Transmission Corp.; Notice of Request Under Blanket Authorization

June 25, 1993.

Take notice that on June 22, 1993, CNG Transmission Corporation, 445 West Main Street, Clarksburg, West Virginia 26301, filed a request for authorization pursuant to sections 157.205 and 157.212 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205 and 157.212), to add an additional delivery point to an existing, certificated transportation service that CNG provides to two cogenerator customers, Northeast Energy Associates (Northeast) and North Jersey Energy Associates (North Jersey), as more fully described herein.

CNG states that pursuant to a certificate of public convenience and necessity issued by Commission Order on September 13, 1990, Docket No. CP88-195-000 *et al* (52 FERC ¶ 61,257), CNG is authorized to transport up to 50,000 Dt of natural gas per day for Northeast and 22,000 Dt of natural gas per day for North Jersey, pursuant to transportation agreements dated March 1, 1991. According to CNG, under the firm transportation agreements, CNG receives Northeast's and North Jersey's gas at an interconnection with TransCanada at Niagara Falls, Erie County, New York and then delivers such at one of the following existing delivery points:

(1) The interconnection between the facilities of CNG and the facilities of Transcontinental Gas Pipe Line Corporation in Clinton County, Pennsylvania, at a point known as Leidy.

(2) The interconnection between the facilities of CNG and Texas Eastern Transmission Corporation in Westmoreland County, Pennsylvania, at a point known as Oakford.

By this request, CNG seeks authorization to add one additional delivery point for Northeast and North Jersey at an existing interconnection between the facilities of CNG and Texas Eastern, in Franklin County, Pennsylvania, at a point known as Oakford.

CNG further states that this proposed additional delivery point gives CNG a third option in delivering these volumes, thereby increasing CNG's operating flexibility and that no new facilities are needed to effectuate the deliveries at Chambersburg.

Finally, CNG verifies that the following are true: (1) The total volumes to be delivered to a customer after the request do not exceed the total volumes authorized prior to the request; (2) The change is not prohibited by an existing tariff of the certificate holder; and (3) CNG will accomplish the deliveries to Northeast and North Jersey without detriment or disadvantage to its other customers.[1] The proposed additional delivery point will have a beneficial impact on CNG's system-wide peak day and annual deliveries by increasing CNG's operating flexibility. CNG verifies that the proposed facilities comply with the requirements of Subpart F of Part 157 of the Commission's Regulations under the Natural Gas Act.

Any person or the Commission's staff may, within 45 days after issuance of the instant notice by the Commission, file pursuant to Rule 214 of the Commission's Procedural Rules (18 CFR 385.214) a motion to intervene or notice of intervention and pursuant to § 157.205 of the Regulations under the Natural Gas Act (18 CFR 157.205) a protest to the request. If no protest is filed within the time allowed therefor, the proposed activity shall be deemed to be authorized effective the day after the time allowed for filing a protest. If a protest is filed and not withdrawn within 30 days after the time allowed for filing a protest, the instant request shall be treated as an application for authorization pursuant to section 7 of the Natural Gas Act.

Lois D. Cashell,

Secretary.

[FR Doc. 93-15485 Filed 6-30-93; 8:45 am]

BILLING CODE 6717-01-M

[1] CNG will deliver the Northeast and North Jersey volumes at Chambersburg only on days when sufficient capacity is available.

[Docket No. RP93-5-000]

Northwest Pipeline Corp., Notice of Informal Settlement Conference

June 25, 1993.

Take notice that an informal settlement conference will be convened in this proceeding on July 7, 1993 at 9 a.m. at the offices of the Federal Energy Regulatory Commission, 810 First Street, NE., Washington, DC, 20426, for the purpose of exploring the possible settlement of the issues in this proceeding.

Any party, as defined by 18 CFR 385.102(c), or any participant as defined by 18 CFR 385.102(b), is invited to attend. Persons wishing to become a party must move to intervene and receive intervenor status pursuant to the Commission's regulations (18 CFR 385.214).

For additional information, contact Marc G. Denkinger (202) 208-2215 or Kathleen M. Dias (202) 208-0524.

Lois D. Cashell,

Secretary.

[FR Doc. 93-15486 Filed 6-30-93; 8:45 am]

BILLING CODE 6717-01-M

Office of Fossil Energy

[FE Docket No. 93-12-NG]

American Hunter Exploration Ltd.; Blanket Authorization To Export Natural Gas to Mexico

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of order.

SUMMARY: The Office of Fossil Energy of the Department of Energy gives notice that it has issued an order granting blanket authorization to American Hunter Exploration Ltd. to export up to 150 Bcf of natural gas to Mexico over a two-year period beginning on the date of first delivery.

This order is available for inspection and copying in the Office of Fuels Programs Docket Room, 3F-056, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-9478. The docket room is open between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, DC on June 24, 1993.

Clifford P. Tomaszewski,

Director, Office of Natural Gas, Office of Fuels Programs, Office of Fossil Energy.

[FR Doc. 93-15592 Filed 6-30-93; 8:45 am]

BILLING CODE 6450-01-M

[FE Docket No. 93-39-NG]

El Paso Gas Marketing Co.; Order Granting Blanket Authorization To Export Natural Gas to Mexico

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of order.

SUMMARY: The Office of Fossil Energy of the Department of Energy gives notice that it has issued an order granting El Paso Gas Marketing Company authorization to export up to 75 Bcf of natural gas to Mexico over a two-year term, beginning on the date of first delivery.

This order is available for inspection and copying in the Office of Fuels Programs docket room, 3F-056, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-9478. The docket room is open between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, DC, June 24, 1993.

Clifford P. Tomaszewski,

Director, Office of Natural Gas, Office of Fuels Programs, Office of Fossil Energy.

[FR Doc. 93-15593 Filed 6-30-93; 8:45 am]

BILLING CODE 6450-01-M

[FE Docket No. 93-35-NG]

Meridian Marketing & Transmission Corp.; Blanket Authorization To Export Natural Gas to Mexico

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of order.

SUMMARY: The Office of Fossil Energy of the Department of Energy gives notice that it has issued an order granting blanket authorization to Meridian Marketing & Transmission Corp. to export up to 72 Bcf of natural gas to Mexico over a two-year period beginning on the date of first delivery.

This order is available for inspection and copying in the Office of Fuels Programs Docket Room, 3F-056, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-9478. The docket room is open between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, DC on June 24, 1993.

Clifford P. Tomaszewski,

Director, Office of Natural Gas, Office of Fuels Programs, Office of Fossil Energy.

[FR Doc. 93-15594 Filed 6-30-93; 8:45 am]

BILLING CODE 6450-01-M

Western Area Power Administration

[Rate Order No. WAPA-62]

Amistad and Falcon Projects Notice of a Rate Order No. WAPA-62

AGENCY: Western Area Power Administration, DOE.

ACTION: Notice of a Rate Order—Amistad and Falcon Projects

SUMMARY: Notice is given of the confirmation and approval by the Assistant Secretary for Energy Efficiency and Renewable Energy (Assistant Secretary) of the Department of Energy (DOE) of Rate Order No. WAPA-62 placing a rate extension into effect on an interim basis beginning on June 8, 1993, for power marketed by the Western Area Power Administration (Western) from the Amistad and Falcon Projects under contract No. 7-07-50-P0890. The rate formula will remain in effect on an interim basis until the Federal Energy Regulatory Commission (FERC) confirms, approves, and places it in effect on a final basis or until it is replaced by another rate.

The Amistad and Falcon Dams are international storage projects located on the Rio Grande River between Texas and Mexico. The power from these dams is marketed by Western under the terms of contract No. 7-07-50-P0890 dated August 9, 1977, and amended on April 10, 1986. The rate formula of that contract was approved by the Federal Power Commission, predecessor to the FERC, for a 5-year period beginning June 8, 1983, in Docket No. E-9566 on August 12, 1977.

A 5-year rate extension approving this same methodology through June 7, 1993, was ordered by FERC on July 20, 1988, in 44 FERC ¶ 62,058.

According to article 9(a) of that contract, Western calculates the annual installment to be paid by the South Texas Electric Cooperative, Inc., and the Medina Electric Cooperative, Inc. (STEC/MEC), for the power generated at the Amistad and Falcon Powerplants on or before August 31 of the year preceding the fiscal year to which it pertains.

Each annual installment pays the annual amortized portion of the United States investment in the Falcon and Amistad hydroelectric facilities with interest, and the associated operation, maintenance, and administrative costs.

This repayment schedule is not dependent upon the power and energy made available for sale or the rate of generation each year.

Western will continue to provide STEC/MEC with a revised exhibit A by August 31 of each year using the same methodology.

DATES: The rate extension will become effective on an interim basis, June 8, 1993; and will remain effective until FERC confirms, approves, and places the rate in effect on a final year basis for a 5-year period, or until this rate schedule is superseded.

FOR FURTHER INFORMATION CONTACT:

Mr. John Harrington, Deputy Area Manager, Salt Lake City Area Office, Western Area Power Administration, P.O. Box 11606, Salt Lake City, UT 84147-0606, (801) 524-5493.

Ms. Deborah Linke Director, Division of Marketing and Rates, Western Area Power Administration, P.O. Box 3402, Golden, CO 80401-3398, (303) 231-1535.

Mr. Joel Bladow, Assistant Administrator for Washington Liaison, Western Area Power Administration, Room 8G061, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585-0001, (202) 586-5581.

SUPPLEMENTARY INFORMATION: By Amendment No. 2 to Delegation Order No. 0204-108, published August 23, 1991 (56 FR 41835), the Secretary of Energy delegated: (1) the authority to develop long-term power and

transmission rates on a nonexclusive basis to the Administrator of Western; (2) the authority to confirm, approve, and place such rates in effect on an interim basis to the Assistant Secretary; and (3) the authority to confirm, approve, and place into effect on a final basis, to remand, or to disapprove such rates to FERC. Existing DOE procedures for public participation in power rate adjustments (10 CFR Part 903) became effective on September 18, 1985 (50 FR 37835). This rate extension is issued pursuant to the Delegation Order and the rate extension procedures in 10 CFR Part 903.

Rate Order No. WAPA–62 confirming and approving a rate extension on an interim basis is hereby issued, and the rate will be promptly submitted to the FERC for confirmation and approval on a final basis.

Issued at Washington, DC, June 9, 1993.

Robert L. San Martin,

Acting Assistant Secretary, Energy Efficiency and Renewable Energy.

June 9, 1993.

These power rates are established pursuant to section 302(a) of the Department of Energy (DOE) Organization Act, 42 U.S.C. 7152(a), through which the power marketing functions of the Secretary of the Interior and the Bureau of Reclamation (Reclamation) under the Reclamation Act of 1902, 43 U.S.C. 371 *et seq.*, as amended and supplemented by subsequent enactments, particularly section 9(c) of the Reclamation Act of 1939, 43 U.S.C. 485h(c), and acts specifically applicable to the Falcon Project and the Amistad Project, were transferred to and vested in the Secretary of Energy (Secretary).

By Amendment No. 2 to Delegation Order No. 0204–108, published August 23, 1991 (56 FR 41835), the Secretary delegated (1) the authority to develop long-term power and transmission rates to the Administrator of the Western Area Power Administration (Western); (2) the authority to confirm, approve, and place into effect such rates on an interim basis to the Assistant Secretary for Conservation and Renewable Energy (Assistant Secretary); and (3) the authority to confirm, approve, and place in effect on a final basis, to remand, or to disapprove those rates to the Federal Energy Regulatory Commission (FERC). This rate extension is issued pursuant to the delegation to the Administrator of Western and the Assistant Secretary and the rate adjustment procedures in 10 CFR part 903, published in the **Federal Register** at 50 FR 37835 on September 18, 1985.

Acronyms and Definitions

As used in this rate order, the following acronyms and definitions apply:

CPL: Central Power and Light Company.

DOE: Department of Energy.

DOE Order RA 6120.2: An order dealing with power marketing administration financial reporting.

FERC: Federal Energy Regulatory Commission.

FPC: Federal Power Commission.

FY: Fiscal year.

kWh: Kilowatthour.

MEC: Medina Electric Cooperative, Inc.

mills/kWh: Mills per kilowatthour.

NEPA: National Environmental Policy Act of 1969.

O&M: Operations and maintenance.

PRS: Power repayment study.

Reclamation: Bureau of Reclamation, U.S. Department of the Interior.

STEC: South Texas Electric Cooperative, Inc.

U.S. Section: U.S. Section of the International Boundary and Water Commission.

Western: Western Area Power Administration, U.S. Department of Energy.

Effective Date

This extension will become effective on an interim basis on June 8, 1993, and will be in effect pending FERC's approval of them or substitute rates on a final basis for a 5-year period, or until superseded.

Public Notice and Comment

Paragraph 903.23(a) of 10 CFR part 903, for rate extensions, does not require a consultation and comment period, nor public information or comment forums. On March 11, 1993, Western notified the customers—Medina Electric Cooperation, Inc. (MEC), in Hondo, Texas, and South Texas Electric Cooperative, Inc. (STEC), in Nursery, Texas, of Western's intent to extend the rate. Western also discussed the rate extension, answered questions, and received comments and suggestions. No significant issues were raised. The customers expressed comfort with the methodology presently used and support for the rate extension.

Project History

On August 12, 1977, in Docket No. E–9566, the FPC approved for a 5-year period the rate formula contained in contract No. 7–07–50–P0890, between Reclamation and two electric cooperatives, to become effective on the date of initial operation of Amistad Powerplant (June 8, 1983). STEC and MEC agreed to purchase the output of the Amistad and Falcon Powerplants for a 50-year period, beginning when initial electric service became available from Amistad. The cooperatives agreed to take all Amistad and Falcon power and to pay the United States the following:

The amount of each annual installment shall be the sum of:

(1) A fixed annual payment of $313,178 as a contribution to the amortization of the United States investment in the Falcon hydroelectric facilities and in the penstocks at Amistad Dam. The annual payment shown above will be adjusted at the time this contract becomes effective; plus

(2) An amount necessary to repay in equal annual installments amortized over a 50-year period, the United States actual total investment costs, with interest, for hydroelectric power installation at Amistad Dam, not including penstocks, to be under the jurisdiction of the Section, including the costs of engineering plans, supervision, administration of construction, and interest during construction * * *; plus

(3) The annual operation, maintenance, replacement, administration costs of the Section and the administration costs of the Bureau related directly or indirectly to the United States power facilities at Amistad Dam and at Falcon Dam, provided that such costs shall be based on prudent and businesslike management practices and in accordance with established electric industry operation and maintenance practices.

The power marketing functions of Reclamation were transferred to Western on October 1, 1977, and Western became responsible for the administration of both of the above contracts.

Western, STEC, and MEC executed supplement No. 1 to contract No. 7–70–50–P0890 on April 10, 1986, to clarify the method for determining the annual installment consistent with DOE Order No. RA 6120.2. Those clarifications address repayment of Falcon hydroelectric facilities within the remaining period, establish interest during construction at 7 percent, capitalize major replacements and additions at current interest rates, and specify the actual date of initial service as June 8, 1983.

Supplement No. 1 requires that the amount of each annual installment be established in advance by the contracting officer in consultation with the U.S. Section and submitted to the cooperatives as exhibit A on or before August 31 of the year preceding the appropriate fiscal year in accordance with the following:

The amount of each annual installment shall be the sum of:

(1) An annual installment including interest, to amortize within the remaining

period, the unpaid United States investment in the Falcon hydroelectric facilities and in the penstocks at Amistad Dam; plus

(2) An annual installment to amortize over a 50-year period, the United States actual total investment costs with interest, for hydroelectric power facilities, not including penstocks, at Amistad Dam to be under the jurisdiction of the U.S. Section, including the costs of engineering plans, supervision, administration of construction, and interest during construction * * *, and

(3) The annual operation, maintenance, replacement, administration costs of the U.S. Section and the administration costs of Western related directly or indirectly to the United States power facilities at Amistad Dam and at Falcon Dam, provided that such costs shall be based on prudent and businesslike management practices and in accordance with established electric industry operation and maintenance practices * * *.

The billing procedures contained in supplement No. 1 require Western to submit bills to the cooperatives for each monthly payment on the annual installment on or before the tenth day of the month for which such payment is due. Payments are due and payable by the cooperatives on the first day of the following month. Western divides the calculated annual installment by 12 and bills the customer monthly for this amount.

In Rate Order No. WAPA–37, Western requested FERC approval of a 5-year extension of the rate terms of the contract. FERC approved the rate extension through June 7, 1993, in Docket No. EF88–5101–000 on July 20, 1988, at 44 FERC ¶ 62,058. The rate terms remain the same as those approved on July 20, 1988. FERC approval is now sought for another 5-year extension through June 7, 1988, of those same rate terms.

Paragraph 903.23(a) of 10 CFR part 903, for rate extensions, does not require a consultation and comment period, nor public information or comment forums. On March 11, 1993, Western notified the customers—Medina Electric Cooperative, Inc. (MEC), in Hondo, Texas, and South Texas Electric Cooperative, Inc. (STEC), in Nursery, Texas, of Western's intent to extend the rate formula. Western also discussed the rate extension, answered questions, and received comments and suggestions. No significant issues were raised. The customers expressed comfort with the methodology presently used and support for the rate extension.

Power Repayment Studies

Electric service contract No. 7–07–50–P0890, dated August 9, 1977, and supplements thereto (in article 6(a)) require that Western calculate the annual installment to be paid by STEC/MEC for the power generated at the Falcon and Amistad Powerplants, by consultation with the U.S. Section, and submit it to STEC/MEC in the form of a contract exhibit on or before August 31 of the year preceding the FY to which it pertains.

Because of the August 31 due date of the exhibit A and the contract requirements, it is necessary to cover 3 years in the annual installment. The previous FY reflects actual figures; the current year in which the annual installment is being calculated reflects updated estimates; and the first future year for which the annual installment is being calculated reflects projected estimates. The previous FY with actual data is a final calculation for that year and normally does not change on future calculations. Annual installments have been prepared each year and the same methodology has been followed since the contract became effective in 1983.

Statement of Revenue and Related Expenses

The following tables provide a summary of revenues and expense data for the previous 5 years and the future 5-year proposed rate approval period:

AMISTAD/FALCON COMPARISON OF 5-YEAR REVENUES AND EXPENSES

[$1,000]

	FY 1988–92 actual	FY 1988–92 projected	Difference
Total revenues	17,543	18,878	<1,355>
Revenue distribution:			
O&M	3,766	4,996	<1,230>
Interest	11,941	12,149	<208>
Investment repayment	1,842	2,025	<183>
Prior-year adjustment	6	0	<6>
Total	17,543	19,170	<1,627>

AMISTAD/FALCON 6-year Projections Revenues and Expenses

[$1,000]

	FY 1993–98 projected
Total revenues	20,445
Revenue Distribution:	
O&M	4,972
Interest	13,893
Investment Repayment	1,580

AMISTAD/FALCON 6-year Projections Revenues and Expenses—Continued

[$1,000]

	FY 1993–98 projected
Prior-Year Adjustment	.....
Total	20,445

Environmental Evaluation

In compliance with the National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq.; Council on Environmental Quality Regulations (40 CFR part 1500–1508); and DOE NEPA Regulations (10 CFR part 1021), Western has determined that this action is categorically excluded from the preparation of an environmental assessment or environmental impact statement.

Executive Order 12291

DOE has determined that this action is not a major rule within the meaning of the criteria of section 1(b) of Executive Order 12291. In addition, Western has an exemption from sections 3, 4, and 7 of that order and, therefore, will not prepare a regulatory impact statement.

Availability of Information

Information regarding this rate extension is available for public review in the Salt Lake City Area Office, Western Area Power Administration, 257 East 200 South, Suite 475, Salt Lake City, Utah 84111; in the Office of the Director, Division of Marketing and Rates, Western Area Power Administration, 1627 Cole Boulevard, Golden, Colorado 80401; and in the Office of the Assistant Administrator for Washington Liaison, room 8G–061, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585.

Submission to FERC

The rate extension herein confirmed, approved, and placed into effect on an interim basis, together with supporting documents, will be submitted to the FERC for confirmation and approval on a final basis.

Order

In view of the foregoing and pursuant to the authority delegated to me by the Secretary of Energy, I hereby confirm and approve and place in effect on an interim basis an extension of the rate provisions contained in contract No. 7–07–50–P0890 and supplement No. 1 to that contract effective on June 8, 1988.

The rate provisions shall remain in effect on an interim basis pending Federal Energy Regulatory Commission confirmation and approval of this or a substitute rate on a final basis or until superseded through June 7, 1998.

Issued in Washington, D.C., June 9, 1993.

Robert L. San Martin,

Acting Assistant Secretary for Energy Efficiency and Renewable Energy.

[FR Doc. 93–15598 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–P

Intent to Adjust the Salt Lake City Area Integrated Projects Firm Power Rate and Colorado River Storage Project Firm Transmission Rate, and Invitation for Public Participation

AGENCY: Western Area Power Administration, DOE.

ACTION: Notice of intent to adjust the Salt Lake City Area Integrated Projects (Integrated Projects) firm power rate and Colorado River Storage Project (CRSP) firm transmission rate, and invitation for public participation.

SUMMARY: Western Area Power Administration (Western) plans to hold a series of public meetings in preparation for a public process to adjust the Integrated Projects firm power rate and CRSP firm transmission rate. Those who wish to be notified about the meetings, receive mailings, and/or be included in the public process may send a written request to be placed on the mailing list now being compiled for the rate adjustments.

Firm Power Rate: The implementation of Title II—Central Utah Project Completion Act and Title XVIII—Grand Canyon Protection Act of the Reclamation Projects Authorization and Adjustment Act of 1992, is expected to require an adjustment in the Integrated Projects firm power rate.

Firm Transmission Rate: Review of the current CRSP rate is being considered and may be revised as necessary.

FOR FURTHER INFORMATION CONTACT: Those persons or parties wishing to be notified of meetings, mailings, and/or the progress of the anticipated rate adjustment process should send a written request to:

Mr. Lloyd Greiner, Area Manager, Salt Lake City Area Office, Western Area Power Administration, P.O. Box 11606, Salt Lake City, UT 84147–0606. (801) 524–6372

SUPPLEMENTARY INFORMATION: Power rates for the Integrated Projects, transmission rates for the CRSP, and related activities are established pursuant to section 302(a) of the Department of Energy (DOE) Organization Act, 42 U.S.C. 7152(a), through which the power marketing functions of the Secretary of the Interior and the Bureau of Reclamation (Reclamation) under the Reclamation Act of 1902, 43 U.S.C. 371 *et seq.*, as amended and supplemented by subsequent enactments, particularly section 9(c) of the Reclamation Project Act of 1939, 43 U.S.C. 485h(c), and other acts specifically applicable to the project system involved, were transferred to and vested in the Secretary of Energy (Secretary).

By Amendment No. 2 to Delegation Order No. 0204–108, published August 23, 1991 (56 FR 41835), the Secretary delegated (1) the authority to develop long-term power and transmission rates on a nonexclusive basis to the Administrator of Western; (2) the authority to confirm, approve, and place such rates into effect on an interim basis to the Assistant Secretary; and (3) the authority to confirm, approve, and place into effect on a final basis, to remand, or to disapprove such rates to the Federal Energy Regulatory Commission. Existing DOE procedures for public participation in power rate adjustments (10 CFR part 903) became effective on September 18, 1985 (50 FR 37835).

Availability of Information

All brochures, studies, comments, letters, memorandums, and other documents made or kept by Western in addition to the sections of the legislation specified in this notice for the purpose of developing the proposed rates for firm power and firm transmission service are and will be available for inspection and copying at Western's Salt Lake City Area Office, 257 East 200 South, suite 475, Salt Lake City, Utah 84111–2048.

Issued at Golden, Colorado, May 27, 1993.

William H. Clagett,

Administrator.

[FR Doc. 93–15597 Filed 6–30–93; 8:45 am]

BILLING CODE 6450–01–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–4672–9]

Agency Information Collection Activities Under OMB Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), this notice announces the Office of Management and Budget's (OMB) responses to Agency PRA clearance requests.

FOR FURTHER INFORMATION CONTACT: Sandy Farmer (202) 260–2740.

SUPPLEMENTARY INFORMATION:

OMB Responses to Agency PRA Clearance Requests

OMB Approvals

EPA ICR No. 0597.05; Tolerance Petitions for Pesticides on Food/Feed and New Inert Ingredients; OMB No. 2070–0024; was approved 05/21/93; expires 05/31/96.

EPA ICR No. 0328.03; Spill Prevention, Control, and Countermeasure Plans, OMB No. 2050–0021; was approved 05/21/93; expires 06/30/94.

EPA ICR No. 1420.03; Prohibition of Hexavalent Chromium Chemicals in Comfort Cooling Towers, Information Requirements; OMB No. 2060–0193; expires 05/31/96.

EPA ICR No. 1635.01; 1990 Baseline and Current Reduced Use of Methyl Chloroform and CFC–113 in the Manufacture Process of Products and 24-Hour Accessibility to Records by EPA; OMB No. 2060–0259; was approved 05/24/93; expires 05/31/96.

EPA ICR No. 0662.04; NSPS for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry (Subpart VV); OMB No. 2060–0012; was approved 05/28/93; expires 05/31/96.

EPA ICR No. 1506.04; NSPS for Municipal Waste Combustors Information Requirements—(Subpart EA); OMB No. 2060–0210; was approved 05/20/93; expires 05/31/96.

EPA ICR No. 1011.03; Partial Updating of TSCA Inventory Data Base, Production and Site Reports; OMB No. 2070–0070; was approved 05/27/93; OMB No. 2070–0070; expires 05/31/95.

EPA ICR No. 1547.02; The Pesticides Enforcement and Applicator Certification Cooperative Agreements Output, Projections/Quarterly Accomplishments Reporting Form; OMB No. 2070–0113; was approved 05/31/93; expires 08/31/93.

EPA ICR No. 1636.01; Information Collection Request for the Notice of Rulemaking for Allowance Allocations, Reserves, and Related Issues; OMB No. 2060–0261; was approved 06/04/93; expires 01/31/96.

EPA ICR No. 0938.05; General Administrative Requirements for Assistance Programs; OMB No. 2030–0020; was approved 06/04/93; expires 06/30/96.

EPA ICR No. 1432.13; Recordkeeping and Periodic Reporting of the

Production Import, and Export and Feedstock Use of Ozone-Depleting Substances; Amendment to Establish Baselines for Newly Listed Ozone; OMB No. 2060–0170; was approved 06/08/93; expires 10/31/95.

OMB Disapprovals

EPA ICR No. 1591.02; Reformulated Gasoline and Anti-Dumping Regulations was disapproved 05/11/93.

OMB Extensions of Expiration Dates

EPA ICR No. 0111.06; National Emission Standard for Asbestos; OMB No. 2060–0101; expiration date was extended to 11/30/93.

OMB Amendment

EPA ICR No. 1602.01; Maximum Achievable Control Technology Standards Development Under Title III (Section 112) of the Clean Air Act Regulatory Development Program; was approved 03/20/92; OMB No. 2060–0239; expires 03/31/95. On 06/16/93, OMB amended the approval of this ICR to add burden hours for Asbestos Processing Area Source Category.

Dated: June 25, 1993.

Jane Stewart,

Acting Director, Regulatory Management Division.

[FR Doc. 93–15572 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–F

[FRL–4673–4]

Prevention of Significant Deterioration of Air Quality (PSD) Final Determinations

AGENCY: Environmental Protection Agency.

ACTION: Notice of final actions.

SUMMARY: The purpose of this notice is to announce that between August 31, 1992 and January 31, 1993, the United States Environmental Protection Agency (EPA) Region II Office, issued 3 final determinations, the New York State Department of Environmental Conservation (NYSDEC) issued 9 final determinations, and the New Jersey Department of Environmental Protection and Energy (NJDEPE) issued 4 final determinations pursuant to the Prevention of Significant Deterioration of Air Quality (PSD) regulations codified at 40 CFR 52.21.

DATES: The effective dates for the above determinations are delineated in the following chart (See **SUPPLEMENTARY INFORMATION**).

FOR FURTHER INFORMATION CONTACT: Maria N. Stanco of the Permitting and Toxics Support Section, Air Compliance Branch, Division of Air and Waste Management, U.S. Environmental Protection Agency Region II Office, 26 Federal Plaza, room 505, New York, New York 10278, (212) 264–4726.

SUPPLEMENTARY INFORMATION: Pursuant to the PSD regulations, the EPA Region II, the NYSDEC, and the NJDEPE have made final determinations relative to the sources listed below:

Name	Location	Project	Agency	Final action	Date
Holtsville/Combined Cycle Plant.	Holtsville, New York.	150 MW combined cycle gas turbine cogeneration project firing natural gas with #2 oil as backup fuel.	NYSDEC	PSD Permit	Sept. 1, 1992.
Lakewood Cogeneration, L.P.	Lakewood, New Jersey.	2—1190 MMBTU/hr combustion turbines, 131 MMBTU/hr auxiliary boiler and cooling tower. Minor changes in PM emission calculation, revised specifications cooling tower and change in stack location.	NJDEPE	PSD Permit Modification.	Sept. 4, 1992.
United American Energy	Fort Edward, New York.	100 MW combined cycle gas turbine cogeneration project firing natural gas with #2 oil as backup fuel.	NYSDEC	Nonapplicability	Sept. 30, 1992.
Rotterdam Generating Company L.P.	Rotterdam, New York.	230 MW combined cycle gas turbine cogeneration project firing natural gas. In addition, four emergency engine generators firing #2 oil will be utilized.	NYSDEC	Nonapplicability	Oct. 19, 1992.
Kamine/Besicorp Corning L.P.	Corning, New York.	79 MW combined cycle gas turbine cogeneration project firing natural gas with #2 oil as backup fuel.	NYSDEC	PSD Permit	Nov. 5, 1992.
NYC Department of Sanitation, Southwest Incinerator Facility.	Brooklyn, New York.	Replacement of air pollution control equipment and exiting stack.	NYSDEC	Nonapplicability	Nov. 6, 1992.
Kamine/Besicorp Beaver Falls L.P.	Beaver Falls, New York.	79 MW combined cycle gas turbine cogeneration project firing natural gas with #2 oil as backup fuel.	NYSDEC	PSD Permit	Nov. 9, 1992.
O'Shanter Resources Inc., Lakeview Cogeneration.	Lakeview, New York.	5500 KW Two 3890 HP dual fuel engines supplying electricity and steam to the Lakeview Correctional Facility.	NYSDEC	Nonapplicability	Nov. 11, 1992.
Nissequogue Cogeneration.	Nissequogue, New York.	40 MW combined cycle gas turbine cogeneration project firing natural gas with #2 oil as backup fuel.	NYSDEC	Nonapplicability	Nov. 12, 1992.
Sithe Independence Power Partners.	Oswego, New York.	1012 MW combined cycle gas turbine cogeneration project firing natural gas. In addition, two 250 MMBTU auxiliary boilers firing natural gas with #2 oil as backup fuel.	NYSDEC	PSD Permit	Nov. 24, 1992.
Hoechst-Celanese	Bridgewater, New Jersey.	3.8 MW Cogeneration Plant	NJDEPE	Nonapplicability	Dec. 16, 1992.
Ciba Geigy	Summit, New Jersey.	96 MMBTU/hr Package Boiler	NJDEPE	Nonapplicability	Dec. 23, 1992.
Virgin Islands Water and Power Authority Units 16, 17.	St. Croix, Virgin Islands.	2—Oil fired gas turbines (Unit 16–23 MW, Unit 17–20 MW).	EPA	PSD Permit	Dec. 28, 1992.
Eli Lilly Industries, Inc	Carolina, Puerto Rico.	Incorporate 39 ton NO_X emission limit increase and limitation on fuel use to 75% of capacity.	EPA	PSD Permit Modification.	Jan. 22, 1993.

Name	Location	Project	Agency	Final action	Date
Keystone Energy Service Co.	Logan Township, New Jersey.	Allow for use of either SNCR or SCR to control NO_X emissions.	NJDEPE	PSD Administrative Amendment.	Mar. 1, 1993.
Hess Oil Virgin Islands Corporation.	St. Croix, Virgin Islands.	25 MW gas turbine firing both gas and liquid fuel.	EPA	PSD Permit	Mar. 22, 1993.

This notice lists only the sources that have received final PSD determinations. Anyone who wishes to review these determinations and related materials should contact the following offices:

EPA Actions

United States Environmental Protection Agency, Region II Office, Air Compliance Branch—room 505, 26 Federal Plaza, New York, New York 10278.

NYSDEC Actions

New York State Department of Environmental Conservation, Division of Air Resources, Source Review and Regional Support Section, 50 Wolf Road, Albany, New York 12233–0001.

NJDEPE Actions

New Jersey Department of Environmental Protection and Energy, Division of Environmental Quality, Bureau of Engineering and Technology, 401 East State Street, Trenton, New Jersey 08625.

If available pursuant to the Consolidated Permit Regulations (40 CFR part 124), judicial review of these determinations under section 307(b) (1) of the Clean Air Act (the Act) may be sought only by the filing of a petition for review in the United States Court of Appeals for the appropriate circuit within 60 days from the date on which these determinations are published in the **Federal Register**. Under section 307(b) (2) of the Act, these determinations shall not be subject to later judicial review in civil or criminal proceedings for enforcement.

William J. Muszynski,

Acting Regional Administrator.

[FR Doc. 93–15523 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–P

[FRL–4673–7]

Proposed Settlement, Clean Air Act Citizen Suit

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed settlement; request for public comment.

SUMMARY: In accordance with section 113(g) of the Clean Air Act, as amended ("Act"), notice is hereby given of a proposed partial consent order in the following three cases:

Sierra Club v. Carol M. Browner, No. 93–0124 (D.C.D.C.), Sierra Club v. Carol M. Browner, No. 93–0197 (D.C.D.C.), and Sierra Club v. Carol M. Browner and Federico M. Pena, No. 93–0564 (D.C.D.C.). These citizen suits were filed under section 304(a) of the Clean Air Act, 42 U.S.C. 7604, and allege that EPA failed to meet a variety of mandatory deadlines under Titles I, II, IV, and VI of the Act, as well as various deadlines under the Clean Air Act Amendments of 1990.

For a period of thirty (30) days following the date of publication of this notice, the Agency will receive written comments relating to the proposed consent order from persons who were not named as parties or intervenors to the litigation in question. EPA or the Department of Justice may withhold or withdraw consent to the proposed order if the comments disclose facts or circumstances that indicate that such consent is inappropriate, improper, inadequate, or inconsistent with the requirements of the Act.

A copy of the proposed order has been lodged with the clerk of the United States District Court for the District of Columbia. Copies are also available from Diane Weeks, Air and Radiation Division (LE–132A), Office of General Counsel, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, (202) 260–7606. Written comments should be sent to John T. Hannon, Esq. at the above address and must be submitted on or before August 21, 1993.

Dated: June 18, 1993.

Gerald H. Yamada,

Acting General Counsel.

[FR Doc. 93–15521 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–M

[FRL–4673–3]

Public Water System Supervision Program Revision for the State of Michigan

AGENCY: Environmental Protection Agency.

ACTION: Notice.

SUMMARY: Public notice is hereby given in accordance with the provisions of section 1413 of the Safe Drinking Water Act, as amended, 42 U.S.C. 300f *et seq.*, and 40 CFR part 142, subpart B, the National Primary Drinking Water Regulations (NPDWR), that the State of Michigan is revising its Public Water System Supervision (PWSS) primacy program. The Michigan Department of Public Health (MDPH) has adopted: (1) Drinking water regulations for total coliform that correspond to the NPDWR for total coliform promulgated by the U.S. Environmental Protection Agency (U.S. EPA) on June 29, 1989 (54 FR 27544–27568) and (2) drinking water regulations for the treatment of surface water that correspond to the NPDWR for surface water treatment promulgated by the U.S. EPA on June 29, 1989 (54 FR 27486–27541). The U.S. EPA has completed its review of Michigan's PWSS primacy program revision.

The U.S. EPA has determined that the current version of the Michigan Total Coliform rule revision substantially meets the requirements of the Federal rule. However, there are several changes that need to be made before the U.S. EPA can grant approval. The necessary changes have been documented in a Memorandum of Agreement (MOA) between the U.S. EPA and the MDPH (available at the State and the U.S. EPA offices listed at the end of this notice), and Michigan is incorporating them into its Total Coliform rule. Michigan's revised Total Coliform rule revision is scheduled to become effective no later than December 31, 1993. Upon notification that Michigan's revised regulations containing the agreed upon changes have become effective, the U.S. EPA will grant approval of the Michigan Total Coliform rule revision without further solicitation of public input.

The U.S. EPA has determined that the Michigan Surface Water Treatment rule revision meets the requirements of the Federal rule. Therefore, the U.S. EPA is proposing to approve the Surface Water Treatment rule revision.

All interested parties are invited to submit written comments on these proposed determinations, and may request a public hearing on or before August 2, 1993. If a public hearing is requested and granted, the corresponding determination shall not become effective until such time, following the hearing, at which the Regional Administrator issues an order affirming or rescinding this action.

Requests for a public hearing should be addressed to: Jennifer Kurtz Crooks (WD–17J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604.

If no timely and appropriate request for a hearing is received, and the Regional Administrator does not elect to hold a hearing on his own motion, these determinations shall become effective 30 days from this Notice date.

Any request for a public hearing shall include the following: (1) The name, address, and telephone number of the individual, organization, or other entity requesting a hearing. (2) A brief statement of the requesting person's interest in the Regional Administrator's determinations and of information that the requesting person intends to submit at such hearing. (3) The signature of the individual making the request; or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

Notice of any hearing shall be given not less than fifteen (15) days prior to the time scheduled for the hearing. Such notice will be made by the Regional Administrator in the **Federal Register** and in newspapers of general circulation in the State of Michigan. A notice will also be sent to the person(s) requesting the hearing as well as to the State of Michigan. The hearing notice will include a statement of purpose, information regarding the time and location, and the address and telephone number where interested persons may obtain further information. The Regional Administrator will issue an order affirming or rescinding his determination upon review of the hearing record. Should the determination be affirmed, it will become effective as of the date of the order.

Should no timely and appropriate request for a hearing be received, and should the Regional Administrator not elect to hold a hearing on his own motion, these determinations shall become effective on August 2, 1993. Please bring this notice to the attention of any persons known by you to have an interest in these determinations.

All documents relating to these determinations are available for inspection between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday, at the following offices:

Michigan Department of Public Health, Division of Water Supply, 3423 North Logan/Martin L. King Jr., Blvd., P.O. Box 30195, Lansing, Michigan 48909, State Docket Officer: Mr. James K. Cleland, (517) 335–9216

Safe Drinking Water Branch, Drinking Water Section, U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604

FOR FURTHER INFORMATION CONTACT: Jennifer Kurtz Crooks, Region 5, Drinking Water Section at the Chicago address given above, telephone 312/886–0244.

Authority: Sec. 1413 of the Safe Drinking Water Act, as amended (1986), and 40 CFR 142.10 of the National Primary Drinking Water Regulations.

Signed this 18th day of June, 1993.

Valdas V. Adamkus,

Regional Administrator, U.S. EPA, Region 5.

[FR Doc. 93–15520 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–P

[FRL–4674–6]

California State Motor Vehicle Pollution Control Standards; Opportunity for Public Hearing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of opportunity for public hearing and public comment.

SUMMARY: The California Air Resources Board (CARB) has notified EPA that it has approved amendments to its evaporative emission standards, durability requirements, and testing procedures for passenger cars, light-duty trucks, medium-duty vehicles, and heavy-duty engines and vehicles, except petroleum-fueled diesel vehicles, for the 1995 model year. By letter dated May 5, 1993, California has requested EPA to grant a waiver of Federal preemption for these amendments pursuant to section 209(b) of the Clean Air Act (Act), 42 U.S.C. 7543(b). This notice announces that EPA has tentatively scheduled a public hearing for July 19, 1993, to consider CARB's request and to hear comments from the general public concerning CARB's request. In addition, EPA is requesting that interested parties submit written comments. Any party desiring to present oral testimony for the record at the public hearing, instead of or in addition to submitting written comments, must notify EPA by July 7, 1993. If no party notifies EPA that it wishes to testify, then no hearing will be held and EPA will consider CARB's request based on written submissions to the record.

It should be noted that these amendments are limited to California's evaporative emission test standards, durability requirements, and testing procedures for the 1995 model year. EPA anticipates a separate waiver request and proceeding regarding CARB's evaporative emission test procedures and standards for the 1996 model year and thereafter. Therefore, parties wishing to comment should confine the scope of their comments to issues pertaining to the 1995 model year.

DATES: EPA has tentatively scheduled a public hearing for July 19, 1993, beginning at 10 a.m., if any party notifies EPA by July 7, 1993, that it wishes to present oral testimony regarding CARB's requests. By July 9, 1993, any person who plans to attend the hearing should call David Dickinson of EPA's Manufacturers Operations Division at (202) 233–9256 to determine if a hearing will be held. Any party may submit written comments regarding CARB's request by August 23, 1993.

ADDRESSES: If EPA receives a request for a public hearing, EPA will hold the public hearing announced in this notice in the first floor conference room at 501 3rd Street, NW., Washington, DC. Parties wishing to present oral testimony at the public hearing should provide written notice to: Charles N. Freed, Director, Manufacturers Operations Division 6405J, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. In addition, written comments regarding the waiver request, should be sent, in duplicate, to Mr. Freed at the same address. Copies of material relevant to the waiver request (Docket No. A–92–05) will be available for public inspection during the working hours of 8:30 a.m. to 12:00 p.m. and 1:30 p.m. to 3:30 p.m., Monday through Friday, at the U.S. Environmental Protection Agency, Air Docket (LE–131), Room M1500, First Floor Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460, Telephone: (202) 260–7548.

FOR FURTHER INFORMATION CONTACT: David J. Dickinson, Attorney/Advisor, Manufacturers Operations Division 6405J, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460, Telephone: (202) 233–9256.

SUPPLEMENTARY INFORMATION:

I. Background and Discussion

Section 209(a) of the Act as amended, 42 U.S.C. 7543(a), provides in part: "No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part * * * [or] require certification, inspection, or any other approval relating to the control of emissions * * * as condition precedent to the initial retail sale, titling (if any), or

registration of such motor vehicle, motor vehicle engine, or equipment."

The State of California may be exempted from the prohibitions of section 209(a) of the Act. Section 209(b) of the Act provides in part that the Administrator shall, after notice and opportunity for public hearing, waive application of the prohibitions of section 209(a) for California "if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. No such waiver shall be granted if the Administrator finds that—(A) the determination of the State is arbitrary and capricious, (B) [California] does not need such * * * standards to meet compelling and extraordinary conditions, or (C) [its] standards and accompanying enforcement procedures are not consistent with section 202(a) of [the Act]."

Once California has been granted a waiver of the application of the prohibitions of section 209(a) for its standards and accompanying enforcement procedures for a class of vehicles, it may adopt other conditions precedent to initial retail sale, titling or registration of the subject class of vehicles without the necessity of receiving further waiver of Federal preemption.

By letter dated January 31, 1992, CARB submitted to EPA a request for waiver of Federal preemption for amendments to its evaporative emission standards, durability requirements, and test procedures. By letter dated May 5, 1993, CARB submitted a revised request for waiver of Federal preemption limiting the applicability of these amendments to the 1995 model year. These amendments which apply to all classes of passenger cars, light-duty trucks, medium-duty vehicles, and heavy-duty vehicles and engines, except petroleum-fueled diesel vehicles:

a. Establish a test to quantify running loss evaporative emissions;

b. Establish a running loss standard of 0.05 grams per mile;

c. Expand the temperature range under which the running loss, diurnal heat build, and hot soak portions of the test are conducted;

d. Extend the duration of the diurnal test from 1 hour to 72 hours;

e. Set forth specific requirements for purging and loading the canister prior to testing; and,

f. Extend the "useful life" for passenger cars and light-duty trucks, medium-duty vehicles and heavy-duty vehicles from 50,000 miles to 100,000 miles, and from 50,000 to 120,000 miles, respectively.

Subsequent to CARB's adoption of its new evaporative standards and test procedures, EPA finalized its new evaporative standards and test procedures, which were published on March 24, 1993 (see 58 FR 16002). EPA's new standards and test procedures will be phased-in commencing 1996, with full compliance by 1999. EPA's present waiver consideration will only consider CARB's request for model year 1995. Therefore, in the context of the waiver criteria set forth in section 209(b), CARB's adopted 1995 standards and test procedures will be compared to EPA's current (pre-1996) standards and test procedures.

California states in its May 5, 1993 letter that it has determined that its amended standards are, in the aggregate, at least as protective of the public health and welfare as the applicable Federal standards. Further, California, referencing its January 31, 1992 waiver request letter, states that it continues to need separate standards to meet compelling and extraordinary conditions. Finally, California states that these amendments are consistent with section 202(a) of the Act. Section 202(a) requires that the procedures provide sufficient lead time to permit the development and application of requisite technology, giving appropriate consideration to the cost of compliance within such period. In addition, EPA has held that section 202(a) prohibits the procedures from imposing inconsistent certification requirements such that manufacturers would be unable to demonstrate compliance with both the California and Federal requirements with the same test vehicle and using a single test sequence. California's request will be considered according to the procedures for a waiver determination, thus an opportunity for a public hearing is being provided. Any party wishing to present testimony at the hearing should address the following issues:

(1) Whether California's determination that its standards are at least as protective of public health and welfare as applicable Federal standards is arbitrary and capricious;

(2) Whether California needs separate standards to meet compelling and extraordinary conditions; and,

(3) Whether California's standards and accompanying enforcement procedures are consistent with section 202(a) of the Act.

II. Procedures for Public Participation

Any party desiring to make an oral statement on the record should file ten (10) copies of its proposed testimony and other relevant material with the Director of EPA's Manufacturers Operations Division at the Director's address listed above not later than July 9, 1993. In addition, the party should submit 25 copies, if feasible, of the planned statement to the presiding officer at the time of the hearing.

In recognition that a public hearing is designed to give interested parties an opportunity to participate in this proceeding, there are no adverse parties as such. Statements by participants will not be subject to cross-examination by other participants without special approval by the presiding officer. The presiding officer is authorized to strike from the record statements which he or she deems irrelevant or repetitious and to impose reasonable limits on the duration of the statement of any participant.

If a hearing is held, the Agency will make a verbatim record of the proceedings. Interested parties may arrange with the reporter at the hearing to obtain a copy of the transcript at their own expense. Regardless of whether a public hearing is held, EPA will keep the record open until August 23, 1993. Upon expiration of the comment period, the Administrator will render a decision on CARB's request based on the record of the public hearing, if any, relevant written submissions, and other information which she deems pertinent. All information will be available for inspection at the EPA Air Docket. (Docket No. A–92–05).

Persons with comments containing proprietary information must distinguish such information from other comments to the greatest possible extent and label it as "Confidential Business Information" (CBI). If a person making comments wants EPA to base its waiver decision in part on a submission labeled as CBI, then a nonconfidential version of the document which summarizes the key data or information should be submitted for the public docket. To ensure that proprietary information is not inadvertently placed in the docket, submissions containing such information should be sent directly to the contact person listed above and not to the public docket. Information covered by a claim of confidentiality will be disclosed by EPA only to the extent allowed and by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies the submission when it is received by EPA, it may be made available to the public without further notice to the person making comments.

Dated: June 25, 1993.

Michael H. Shapiro,

Acting Assistant Administrator for Air and Radiation.

[FR Doc. 93-15573 Filed 6-30-93; 8:45 am]

BILLING CODE 6560-50-P

[FRL-4674-4; ECAO-RTP-0746]

Peer-Review Workshops on the Health Effects of Ozone and Related Photochemical Oxidants

AGENCY: Environmental Protection Agency.

ACTION: Notice of public meeting.

SUMMARY: Two peer-review workshops will be held by the Environmental Criteria and Assessment Office (ECAO) of EPA's Office of Health and Environmental Assessment to facilitate preparation of the health chapters for an external review draft of the revised Air Quality Criteria for Ozone and Related Photochemical Oxidants.

DATES: The first peer-review workshop addresses toxicological effects and will be held on July 7-9, 1993, from 9 a.m. to 5 p.m. at the North Raleigh Hilton and Convention Center, 3415 Old Wake Forest Road, Raleigh, NC, telephone: 1-800-872-1982. The second peer-review workshop deals with human health effects and will be held on July 14-16, 1993, from 9 a.m. to 5 p.m. at the same location. Members of the public are invited to attend.

FOR FURTHER INFORMATION CONTACT: Dr. Judith A. Graham, coordinator for the toxicology and extrapolation chapters, U.S. Environmental Protection Agency, ECAO, MD-52, Research Triangle Park, NC 27711, telephone: 919-541-0349; or James A. Raub, coordinator for the human health effects chapters, same address, telephone: 919-541-4157.

SUPPLEMENTARY INFORMATION: As discussed in a previous call for information (57 FR 38832, August 27, 1992), EPA is undertaking to review and, where appropriate, update and revise the Air Quality Criteria for Ozone and Related Photochemical Oxidants. As part of this review, the first workshop will cover a draft chapter on the toxicological effects of ozone as well as a related draft chapter on the extrapolation of animal toxicological data to humans. The second workshop will cover a draft chapter on the human health effects of ozone. Copies of the draft chapters will be made available to the public at the workshops, and members of the public will have an opportunity to make brief oral statements. Interested parties also are invited to assist the U.S. EPA in developing and refining the scientific information base for further updating of the air quality criteria for ozone by identifying and submitting new information on potential health and environmental effects of ozone. To be considered for inclusion in the criteria document, submitted information should be published or be accepted for publication in a peer-reviewed scientific journal.

The draft health chapters subsequently will be revised and released as part of an external review draft. Draft chapters on ozone air chemistry and the environmental effects of ozone will be reviewed at separate workshops to be announced later this year. Ample opportunity will be provided for public review and submission of written comments upon release of the entire external review draft.

Dated: June 24, 1993.

Gary J. Foley,

Acting Assistant Administrator for Research and Development.

[FR Doc. 93-15574 Filed 6-30-93; 8:45 am]

BILLING CODE 6560-50-M

Science Advisory Board, Executive Committee Meeting; July 20-21, 1993

Pursuant to the Federal Advisory Committee Act, Public Law 92-463, notice is hereby given that the Science Advisory Board's (SAB) Executive Committee, will conduct a meeting on Tuesday and Wednesday, July 20-21, 1993. The meeting will be held in the Administrator's Conference Room 1103 West Tower at the Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. It will begin at 8:30 a.m. and adjourn not later than 5 p.m. on each day.

At this meeting, the Executive Committee plans to review reports from its Committees, including the following: Drinking Water Committee [radon cost engineering portion of Chafee-Lautenburg study; review of ambient water quality criteria]; Ecological Processes and Effects Committee [commentary on coastal programs; review of biotechnology research; review of biocriteria]; Radiation Advisory Committee [commentary on uncertainty analysis].

The Executive Committee also plans to consider a subcommittee draft of a joint SAB/Environmental Financial Advisory Board report on Principles to Consider in Environmental Decision-making.

Administrator Carol Browner is scheduled to meet with the Executive Committee for an hour during the meeting. Other new political appointees may also meet with the Board.

The Executive Committee will hear a description of the Agency's Futures Project and discuss whether, and how the SAB might assist the effort.

As time permits, other issues may be raised by Executive Committee members.

The meeting is open to the public. Any member of the public wishing further information concerning the meeting or who wishes to submit comments should contact Dr. Donald G. Barnes, Designated Federal Official for the Executive Committee (A-101), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, and at 202-260-4126; FAX 202-260-9232; and INTERNET BARNES.Don@EPAMAIL.EPA.GOV@IN. Limited unreserved seating will be available at the meeting.

Date: June 24, 1993.

Donald G. Barnes,

Staff Director, Science Advisory Board.

[FR Doc. 93-15576 Filed 6-30-93; 8:45 am]

BILLING CODE 6560-50-P

[FRL-4673-8]

Kentucky: Final Determination of Adequacy of State/Tribal Municipal Solid Waste Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of final determination of adequacy to fully approve the Commonwealth of Kentucky's Municipal Solid Waste Landfill Permit Program.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that municipal solid waste landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule for such determinations. EPA has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR) that will provide procedures by which EPA will approve, or partially approve, State/Tribal landfill permit programs.

The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus, these approvals are not dependent on final promulgation of the STIR. Prior to promulgation of the STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by part 258 to the extent the State/Tribal permit program allows such flexibility.

Kentucky applied for a determination of adequacy under section 4005 of RCRA. EPA Region IV reviewed Kentucky's MSWLF application and proposed a determination that Kentucky's MSWLF permit program is adequate to ensure compliance with the revised MSWLF Criteria. After consideration of all comments received regarding the determination of adequacy, EPA is today issuing a final determination that Kentucky's program is adequate.

EFFECTIVE DATE: The determination of adequacy for the Commonwealth of Kentucky shall be effective on July 9, 1993.

FOR FURTHER INFORMATION CONTACT: EPA Region IV, 345 Courtland St. NE., Atlanta, Georgia 30365, Attn: Ms. Patricia S. Zweig, mail code 4WD–RCRA, telephone 404–347–2091.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that facilities comply with the Federal Criteria under part 258. Subtitle D also requires in section 4005 that EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

EPA intends to approve State/Tribal MSWLF permit programs prior to the promulgation of STIR. EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

B. State of Kentucky

On February 14, 1992, the Commonwealth of Kentucky submitted a final application for adequacy determination for their MSWLF permit program. On May 4, 1993, EPA published a tentative determination of adequacy for all portions of Kentucky's program. Further background on the tentative determination of adequacy appears at Volume 58 No. 84 FR 26543, May 4, 1993.

Along with the tentative determination, EPA announced the availability of the application for public comment and the date of the public hearing on the application. The EPA Region IV and the Commonwealth of Kentucky held a public hearing at 7:30 p.m. on June 24, 1993, in Frankfort, Kentucky.

The Commonwealth of Kentucky has the authority to issue permits that incorporate the requirements of the Revised Federal MSWLF Criteria to all MSWLFs in the State, with the exception of those located on Tribal Lands. In addition, Kentucky Revised Statute allows the Cabinet to implement conditions upon any MSWLF permit issued by the State in order to provide protection of human health and the environment.

The EPA has determined that the Commonwealth of Kentucky's statutes and administrative regulations provide for a state-wide comprehensive program of solid waste management including specific provisions for public participation, compliance monitoring and enforcement.

C. Public Comment

The EPA received the following public comments on the tentative determination of adequacy for Kentucky's MSWLF permit program.

One commenter asserted that it is unclear whether Kentucky prohibits field filtering of groundwater samples prior to laboratory analysis. The State requires the permit application to include a sampling and analytical plan. The State requires the issuance of a notice of deficiency on any application proposing field filtering as a part of the plan. EPA believes that this permit review process is equally effective as specific regulatory requirements.

One commenter supported the approval of the Kentucky MSWLF program as meeting or exceeding the Federal Criteria, however, expressed concern that the state should incorporate into its regulatory program certain permit requirements that will be covered by the state through permit conditions. Kentucky has demonstrated to EPA that they have authority through their statutes and regulations to establish and enforce the aforementioned permit conditions at MSWLFs. Also, the commenter was concerned that the state needed procedures in place to ensure full implementation of the National Historic Preservation Act Amendments and the Endangered Species Act in state permitting actions. 40 CFR 258.3 requires owners/operators of MSWLFs to comply with any other applicable Federal rules, laws or other requirements. Kentucky demonstrated this capability to EPA's satisfaction through statutes and regulations cited in their application. Further, the commenter requested that the state develop a staffing analysis and budget in order to determine program staff adequacy. Kentucky adequately addressed staff resources in the Program Description of the MSWLF permit application. Furthermore, EPA has no requirement that states/tribes provide an analysis of workload and budget as a part of their MSWLF permit program application.

The commenter requested that the state be required to modify the existing enforcement program to provide parties with the right to participate in the administrative enforcement process prior to the entry of administrative orders negotiated by the Cabinet and owners/operators. Under the draft State/Tribal Implementation Rule, states/tribes are required to ensure adequate opportunity for public participation through any one of three options. The third option, which is met by Kentucky,

requires assurances that the state will provide notice and opportunity for public comment in all proposed settlements of civil enforcement actions. EPA is satisfied that Kentucky meets this requirement through the statutory authorities provided in its Program Description.

D. Decision

After reviewing the public comments submitted in response to the tentative decision, I conclude that Kentucky's application for adequacy determination meets all of the statutory and regulatory requirements established by RCRA. Accordingly, Kentucky is granted approval for all portions of its MSWLF permit program.

Kentucky will be using alternative, but equally effective methods, to ensure that provisions which are technically comparable to the revised federal criteria are being applied in Kentucky. To ensure compliance with all of the revised Federal Criteria, Kentucky will implement the following areas of its MSWLF permit program through enforceable permit conditions.

1. Kentucky will require as a permit condition that the owner/operator of all new units or lateral expansions of MSWLFs will notify the Federal Aviation Administration (FAA) as specified in 40 CFR 258.10(b). Kentucky will add all state airports and the FAA to their public notice mailing list to ensure compliance with 40 CFR 258.10 by October 9, 1993. In Kentucky, all new units and lateral expansions of MSWLFs are required by regulation to be public noticed before a permit will be issued.

2. Kentucky will require as a permit condition that the owner/operator of all MSWLFs will include in its detection monitoring program, the full list of Appendix I constituents as specified in 40 CFR 258.54(a). This permit condition will be enforced prior to October 9, 1993. Kentucky will also enforce through permit conditions, the criteria as specified in 40 CFR 258.53(g) for determining the adequacy of statistical methods. Kentucky will include the statistical methods criteria in the permit application for all MSWLFs prior to October 9, 1993.

3. Kentucky will include as a permit condition prior to October 9, 1993, the requirement that all MSWLFs meet the performance standard for the final cover criteria in 40 CFR 258.60(a)(1).

4. Kentucky will include as a permit condition prior to October 9, 1993, the requirements of 40 CFR 258.73, that all MSWLFs required to implement a corrective action program will provide financial assurance for any necessary corrective action. Under the authority of Kentucky House Bill 839, the state has the ability to utilize and enforce any of the financial assurance mechanisms promulgated pursuant to 40 CFR 258.73.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR part 258 independent of any State/Tribal enforcement program. As EPA explained in the preamble to the final MSWLF criteria, EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by EPA should be considered to be in compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

Today's action takes effect on the date of publication. EPA believes it has good cause under section 553(d) of the Administrative Procedure Act, 5 U.S.C 553(d), to put this action into effect less than 30 days after publication in the **Federal Register**. All of the requirements and obligations in the State's/Tribe's program are already in effect as a matter of State/Tribal law. EPA's action today does not impose any new requirements that the regulated community must begin to comply with. Nor do these requirements become enforceable by EPA as federal law. Consequently, EPA finds that it does not need to give notice prior to making its approval effective.

Compliance with Executive Order 12291: The Office of Management and Budget has exempted this rule from the requirements of Section 3 of Executive Order 12291.

Certification Under the Regulatory Flexibility Act: Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This rule, therefore, does not require a regulatory flexibility analysis.

Authority: This notice is issued under the authority of section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

Dated: June 25, 1993.

Patrick M. Tobin,

Acting Regional Administrator.

[FR Doc. 93-15519 Filed 6-30-93; 8:45 am]

BILLING CODE 6560-50-P

[FRL-4673-5]

Proposed Administrative Settlement Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as Amended by the Superfund Amendments and Reauthorization Act

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice; request for public comment.

SUMMARY: In accordance with section 122(i) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. 9622(i), notice is hereby given that a proposed administrative cost recovery settlement concerning the Valley Plating Superfund Site, Henrico County, VA was issued by the Agency on March 31, 1993 and was approved by the Assistant Attorney General of the United States on April 29, 1993, pursuant to section 122(h)(1) of CERCLA, 42 U.S.C. 9622(h)(1). The settlement resolves an EPA claim under section 107 of CERCLA, 42 U.S.C. 9607, against the Valley Bumper Sales Inc., Valley Bumper Recycling, Inc., and the Estate of Robert Clifton, ("Settlors"). The settlement requires the Settlors to pay $283,000 to the Hazardous Substances Superfund.

For thirty (30) days following the date of publication of this notice, the Agency will receive written comments relating to the Settlement. The Agency's response to any comments received will be available for public inspeciton at the U.S. Environmental Protection Agency, Region III, 841 Chestnut Building, Philadelphia, PA 19107.

DATES: Comments must be submitted on or before thirty (30) days after the date of publication of this notice.

ADDRESSES: The proposed settlement and additional background information relating to the settlement are available for public inspection at the U.S. Environmental Protection Agency, Region III, 841 Chestnut Building, Philadelphia, PA 19107. A copy of the proposed settlement may be obtained from Suzanne Canning, U.S. Environmental Protection Agency, Regional Docket Clerk (3RC00), 841 Chestnut Building, Philadelphia, PA 19107. Comments should reference the "Valley Plating Superfund Site" and "EPA Docket No. III-93-07-DC" and should be forwarded to Suzanne Canning at the above address.

FOR FURTHER INFORMATION CONTACT: Andrew M. Duchovnay, Assistant Regional Counsel, U.S. Environmental Protection Agency, 841 Chestnut Building, Philadelphia, PA 19107, (215) 597–8252.

Dated: June 21, 1993.

William T. Wisniewski,

Acting Regional Administrator, U.S. Environmental Protection Agency, Region III.

[FR Doc. 93–15522 Filed 6–30–93; 8:45 am]

BILLING CODE 6560–50–M

FEDERAL COMMUNICATIONS COMMISSION

Public Information Collection Requirement Submitted to Office of Management and Budget for Review

June 28, 1993.

The Federal Communications Commission has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1980 (44 U.S.C. 3507).

Copies of this submission may be purchased from the Commission's copy contractor, International Transcription Service, Inc., 2100 M Street, NW., suite 140, Washington, DC 20037, (202) 857–3800. For further information on this submission contact Judy Boley, Federal Communications Commission, (202) 632–0276. Persons wishing to comment on this information collection should contact Jonas Neihardt, Office of Management and Budget, room 3235 NEOB, Washington, DC 20503, (202) 395–4814.

OMB Number: 3060–0130

Title: Private Fixed, Mobile and Radiolocation Services Supplementary Information to FCC Form 574

Form Number: FCC Form 574–B

Action: Extension of a currently approved collection

Respondents: Individuals or households, state or local governments, non-profit institutions and businesses or other for-profit (including small businesses)

Frequency of Response: On occasion reporting requirement

Estimated Annual Burden: 300 responses; 1 hour average burden per response; 300 hours total annual burden

Needs and Uses: FCC Rules require the applicants operating on frequencies below 27.5 MHz file the FCC Form 574–B in conjunction with the FCC Form 574. This additional data will enable the FCC to comply with treaty agreements. The FCC Licensing Division will collect and maintain the data. Treaty personnel will report the data as required.

Federal Communications Commission.

William F. Caton,

Acting Secretary.

[FR Doc. 93–15601 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

[DA 93–755; CC Docket No. 83–1376]

Alaska Federal-State Joint Board to Convene a Hearing in Anchorage Alaska on Thursday, July 1, 1993

June 23, 1993.

The Alaska Federal-State Joint Board in CC Docket 83–1376 will convene a hearing on Thursday, July 1, 1993, at 9:30 a.m. in Anchorage, Alaska (1:30 p.m. e.d.t.). The hearing will be held to receive testimony from the citizens of Alaska and other interested persons on the following:

(1) The Tentative Recommendation and Order Inviting Comments, FCC 93J–1, released by the Federal-State Joint Board on May 17, 1993;

(2) The implementation plan filed by Alascom, Inc. on June 7, 1993;

(3) The American Telephone and Telegraph Company (AT&T) response filed on June 7, 1993; and

(4) The AT&T Petition to Terminate the Joint Services Agreement (AT&T Customer Benefit Plan) filed March 31, 1993.

FCC Chairman Quello and FCC Commissioners Duggan and Barrett will participate by means of videoconference facilities in Washington, DC. State Commissioners Susan Knowles (Alaska), Dean J. "Joe" Miller (Idaho), Bruce Hagen (North Dakota), and David Rolka (Pennsylvania) will also participate in the hearing.

The hearing will convene at the video conferencing facilities at 1049 W. 5th Ave., Anchorage, Alaska. Persons wishing to testify either in person or via audio links within the State of Alaska should contact Lorraine Kenyon, Alaska Public Utilities Commission, at (907) 276–6222. Space at the Anchorage videoconference facilities is limited. Members of the public interested in listening to the meeting may do so at the Alaska Public Utilities Commission, Public Hearing Room, Third Floor, 1016 W. 6th Avenue, Anchorage, Alaska. In Washington, DC, the public may listen to the meeting at the FCC, room 856, 1919 M Street, NW. Additional information concerning this hearing may be obtained from Lorraine Kenyon, Alaska Public Utilities Commission, at (907) 276–6222 or from Rose Crellin, Common Carrier Bureau, FCC, at (202) 632–1292.

Interested persons may also provide written testimony or other comments until July 12, 1993. An original and five copies should be filed with the Secretary, Federal Communications Commission, 1919 M Street, NW., Washington, DC 20554. Additional copies should be sent to the following: three copies to Peggy Reitzel, Common Carrier Bureau, Federal Communications Commission, 1919 M Street, NW., Washington, DC 20554; and one copy to ITS, Inc. the Commission's contractor for public records duplication, 2100 M Street, NW., Suite 140, Washington, DC 20037, (202) 857–3800. Comments will be available for inspection and photoduplication in room 239, 1919 M Street, NW., Washington, DC 20554, 9 a.m. to 4:30 p.m. Monday–Friday. Copies may additionally be obtained from ITS, Inc.

Parties should also send copies of filings to the following Alaska Joint Board Members and their staffs: Hon. Bruce Hagen, North Dakota Public Service Commission, State Capitol Building, Bismarck, North Dakota 58505; Hon. Susan M. Knowles, Alaska Public Utilities Commission, 1016 West 6th Avenue, Suite 400, Anchorage, Alaska 99501; Hon. Dean J. "Joe" Miller, Idaho Public Utilities Commission, 472 West Washington, Boise, Idaho 83702; Hon. David Rolka, Pennsylvania Public Utilities Commission, P.O. Box 3265, Harrisburg, Pennsylvania 17105; Lorraine Kenyon, Alaska Public Utilities Commission, 1016 West 6th Avenue, Suite 400, Anchorage, Alaska 99501; Eileen Benner, Idaho Public Utilities Commission, 472 West Washington, Boise, Idaho, 83702; Debra Kriete, Pennsylvania Public Utilities Commission, P.O. Box 3265, Harrisburg, Pennsylvania 17105; Ronald G. Choura, c/o Michigan Public Service Commission, 6545 Mercantile Way, P.O. Box 30221, Lansing, Michigan, 48910; and Rowland Curry, Texas Public Service Commission, 7800 Shoal Creek Blvd. Suite 400N, Austin, Texas 78757.

Federal Communications Commission.

William F. Caton,

Acting Secretary.

[FR Doc. 93–15720 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

Applications for Consolidated Proceeding

1. The Commission has before it the following mutually exclusive applications for a new FM station:

Applicant, city and state	File No.	MM docket No.
A. Howard B. Dolgoff, Miramar Beach, Fl..	BPH–911223ME	93–178
B. Mark and Renee Carter, Miramar Beach, Fl..	BPH–911224MD	.....

2. Pursuant to section 309(e) of the Communications Act of 1934, as amended, the above applications have been designated for hearing in a consolidated proceeding upon the issues whose headings are set forth below. The text of each of these issues has been standardized and is set forth in its entirety under the corresponding headings at 51 Fed. Reg. 19347, May 29, 1986. The letter shown before each applicant's name, above, is used below to signify whether the issue in question applies to that particular applicant.

Issue Heading	Applicant(s)
1. Air Hazard	A
2. Comparative	A, B
3. Ultimate	A, B

3. If there is any non-standardized issue(s) in this proceeding, the full text of the issue and the applicant(s) to which it applies are set forth in an Appendix to this Notice. A copy of the complete HDO in this proceeding is available for inspection and copying during normal business hours in the FCC Dockets Branch (room 230), 1919 M Street, NW., Washington, DC. The complete text may also be purchased from the Commission's duplicating contractor, International Transcription Service, Inc. 2100 M Street, NW., suite 140, Washington, DC 20037; telephone (202) 857–3800.

Larry D. Eads,

Chief, Audio Services Division, Mass Media Bureau.

[FR Doc. 93–15527 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

Renewal Application Designated for Hearing

1. The Commission has before it the following application for renewal of license:

Applicant, city and state	File No.	MM docket No.
A. Metrocomoc, Inc., Berlin, NH.	BR–90113OXE	93–190

(Seeking a renewal of the license of Station WBRL(AM))

2. Pursuant to section 309(e) of the Communications Act of 1934, as amended, the above application has been designated for hearing in a proceeding upon whose issues are set forth below:

1. To determine whether Metrocomco, Inc. has the capability and intent to expeditiously resume broadcast operations of WBRL(AM) consistent with the Commission's Rules.

2. To determine whether Metrocomco, Inc. has violated §§ 73.1740 and/or 73.1750 of the Commission's Rules;

3. To determine, in light of the evidence adduced pursuant to the preceding issues, whether or not grant of the subject renewal of license application would serve the public interest, convenience and necessity.

A copy of the complete HDO in this proceeding is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 320), 1919 M Street, NW., Washington, DC. The complete text may also be purchased from the Commission's duplicating contractor, International Transcription Service, 2100 M Street, NW., suite 140, Washington, DC 20037 (telephone 202–857–3800).

Federal Communications Commission.

Larry D. Eads,

Chief, Audio Services Division, Mass Media Bureau.

[FR Doc. 93–15528 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

Renewal Application Designated for Hearing

1. The Commission has before it the following application for renewal of license:

Applicant, city and state	File No.	MM docket No.
A. Stephen W. Yates, Lufkin, Texas.	BR–900402E6	93–189

(Seeking a renewal of the license of Station KSRK(AM))

2. Pursuant to section 309(e) of the Communications Act of 1934, as amended, the above application has been designated for hearing in a proceeding upon whose issues are set forth below:

1. To determine whether Stephen W. Yates has the capability and intent to expeditiously resume broadcast operations of KSRK(AM) consistent with the Commission's Rules.

2. To determine whether Stephen W. Yates has violated Sections 73.1740 and/or 73.1750 of the Commission's Rules;

3. To determine, in light of the evidence adduced pursuant to the preceding issues, whether or not grant of the subject renewal of license application would serve the public interest, convenience and necessity.

A copy of the complete HDO in this proceeding is available for inspection and copying during normal business hours in the FCC Dockets Branch (room 320), 1919 M. Street, NW., Washington, DC. The complete text may also be purchased from the Commission's duplicating contractor, International Transcription Service, 2100 M Street, NW., suite 140, Washington, DC 20037 (telephone 202–857–3800).

Federal Communications Commission

Larry D. Eads

Chief, Audio Services Division, Mass Media Bureau.

[FR Doc. 93–15529 Filed 6–30–93; 8:45 am]

BILLING CODE 6712–01–M

FEDERAL TRADE COMMISSION

Granting of Request for Early Termination of the Waiting Period Under The Premerger Notification Rules

Section 7A of the Clayton Act, 5 U.S.C. 18a, as added by Title II of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, requires persons contemplating certain mergers or acquisitions to give the Federal Trade Commission and the Assistant Attorney General advance notice and to wait designated periods before consummation of such plans. Section 7A(b)(2) of the Act permits the agencies, in individual cases, to terminate this waiting period prior to its expiration and requires that notice of this action be published in the **Federal Register**.

The following transactions were granted early termination of the waiting period provided by law and the premerger notification rules. The grants were made by the Federal Trade Commission and the Assistant Attorney General for the Antitrust Division of the Department of Justice. Neither agency intends to take any action with respect to these proposed acquisitions during the applicable waiting period.

TRANSACTIONS GRANTED EARLY TERMINATION BETWEEN: 060793 AND 061893

Name of acquiring person, name of acquired person, name of acquired entity	PMN No.	Date terminated
Southwestern Bell Corporation, Gustave M. Hauser, Montgomery Cablevision Limited Partnership	93–1073	06/07/93
Southwestern Bell Corporation, John D. Evans, Evanco, Inc	93–1074	06/07/93
George Soros, Falcon Drilling Company, Inc., Falcon Drilling Company, Inc	93–1094	06/07/93
Burlington Resources, Inc., Petrofina S.A., Fina Oil and Chemical Company	93–1097	06/07/93
Heywood Williams Group PLC, Beekman Settlement, LaSalle-Deitch Co., Inc	93–1108	06/07/93
Protective Life Corporation, Internationale Nederlanden Groep N.V., Wisconsin National Life Insurance Company	93–1111	06/07/93
Shamrock Holdings, Inc., Milton Maltz, Malrite Communications Group, Inc	93–1119	06/07/93
Trefoil Capital Investors, L.P., Roy E. Disney and Patricia A. Disney, Shamrock Holdings, Inc	93–1120	06/07/93
Roy E. Disney and Patricia A. Disney, Roy E. Disney and Patricia A. Disney, Big Country TV of Abilene, Inc	93–1121	06/07/93
Dort A. Cameron III, JWP Inc., JWP Information Services (East), Inc	93–1131	06/07/93
Ibrahim Morales, The Times Mirror Company, KDFW–TV, Inc. and KTBC–TV, Inc	93–1139	06/07/93
Anthony H. Reeves, The Olsten Corporation, The Olsten Corporation	93–1144	06/07/93
First Bank System, Inc., John J. Fauth, Republic Acceptance Corporation	93–1132	06/08/93
GATX Corporation, Westinghouse Electric Corporation, Westinghouse Electric Corporation	93–1149	06/08/93
D.D.I. Inc., First Mississippi Corporation, First Energy Corporation	93–1138	06/09/93
First American Capital, C.V., Commerce Clearing House, Inc., Facts on File, Inc	93–1103	06/10/93
Zions Bancorporation, Discount Corporation of New York, Discount Corporation of New York	93–1123	06/10/93
Acadia Partners, L.P., Major League Marketing, Inc., Major League Marketing, Inc	93–1134	06/10/93
International Semi-Tech Microelectronics, Inc., Semi-Tech (Global) Company Limited, The Singer Company N.V	93–1145	06/10/93
Newell Co., PI Industries, Inc., PI Industries, Inc	93–1153	06/10/93
The Morgan Stanley Real Estate Fund, L.P., BankAmerica Corporation, BankAmerica Corporation	93–1078	06/11/93
Warburg, Pincus Investors, L.P., The News Corporation Limited, Benson Music Group, Inc	93–1150	06/11/93
The Prudential Insurance Co. of America, BraeLoch Holdings, Inc., BraeLoch Holdings, Inc	93–1152	06/11/93
Devon Energy Corporation, Petrofina S.A., Fina Oil and Chemical Company	93–1155	06/11/93
Fleming Companies, Inc., John A. Catsimatidis, Florida Supermarkets, Inc	93–1156	06/11/93
Savannah Foods & Industries, Inc., Ed Newbern, King Packaging Company, Inc	93–1164	06/11/93
Safeguard Scientifics, Inc., JWP Inc., Maris Equipment Company	93–1181	06/11/93
PepsiCo, Inc., Alpac Investments, Inc., Alpac Investments, Inc	93–1063	06/14/93
Cargill, Incorporated, Exxon Corporation, Exxon Corporation	93–1069	06/14/93
Whole Foods Market, Inc., Mrs. Gooch's Natural Food Markets, Inc., Mrs. Gooch's Natural FoodMarkets, Inc	93–1066	06/15/93
Sandra V. Gooch, Whole Foods Market, Inc., Whole Foods Market, Inc	93–1067	06/15/93
Pechiney, S.A., The Stroh Companies, Inc., The Stroh Brewery Company	93–1095	06/15/93
Danny O. Volland, Whole Foods Market, Inc., Whole Foods Market, Inc	93–1112	06/15/93
International Multifoods Corporation, Joseph A. Amicone, J. Amicone Company, Inc	93–1136	06/15/93
Geo. A. Hormel & Company d.b.a. Hormel Foods Corp., Reckitt & Colman plc, Reckitt & Colman Inc	93–1159	06/15/93
Banc One Corporation, Dennis Lochmandy, Prime Bank, c/o Premier Financial Corp	93–1167	06/15/93
United HealthCare Corporation, HMO America, Inc., HMO America, Inc	93–1173	06/15/93
Union Pacific Corporation, Parker & Parsley Petroleum Company, Dorchester Master Limited Partnership	93–1174	06/15/93
Warburg, Pincus Capital Company, L.P., Altrescco Financial, Inc., Altresco Financial, Inc	93–1116	06/16/93
Leslie L. Dan, Hoechst Aktiengesellschaft, Granutec Inc	93–1133	06/16/93
Behr GmbH & Co., Behr America Holding, Inc., Behr America Holding, Inc	93–1083	06/17/93
AST Research Inc., Tandy Corporation, Tandy Corporation	93–1151	06/17/93
General Electric Company, GFC Financial Corporation, Verex Corporation	93–1158	06/17/93
George D. Behrakis, Glaxo Holdings, p.l.c., Glaxo, Inc. and Glaxo Group Ltd	93–1160	06/17/93
VEBA AG, Joseph H. Collie, Southchem, Inc	93–1161	06/17/93
Union Titanium Sponge Corporation, Tremont Corporation, Titanium Metals Corporation	93–1172	06/17/93

FOR FURTHER INFORMATION CONTACT: Sandra M. Peay, or Renee A. Horton, Contact Representatives, Federal Trade Commission, Premerger Notification Office, Bureau of Competition, Room 303, Washington, DC 20580, (202) 326–3100.

By Direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 93–15549 Filed 6–30–93; 8:45 am]

BILLING CODE 6750–01–M

[Dkt. C–3429]

AE Clevite, Inc.; Prohibited Trade Practices, and Affirmation Corrective Actions

AGENCY: Federal Trade Commission.

ACTION: Consent Order.

SUMMARY: In settlement of alleged violations of federal law prohibiting unfair acts and practices and unfair methods of competition, this consent order prohibits, among other things, a Michigan manufacturer of locomotive engine bearings and its parent company, T&N PLC, from fixing prices or from inviting its competitors to fix or raise prices for locomotive engine bearings in the future. The consent order requires AE Clevite and T&N to provide copies of the FTC complaint and consent order to the directors and officers of the company, subsidiaries, and divisions engaged in the design, manufacture, marketing or sale of locomotive engine bearings in the United States.

DATES: Complaint and Order issued June 8, 1993.[1]

FOR FURTHER INFORMATION CONTACT: Ronald Rowe, FTC/H–380, Washington, DC 20580. (202) 326–2610.

[1] Copies of the Complaint, the Decision and Order, and Commissioner Owen's statement are available from the Commission's Public Reference Branch, H–130, 6th Street & Pennsylvania Avenue, NW., Washington, DC 20580.

SUPPLEMENTARY INFORMATION: On Friday, April 2, 1993, there was published in the **Federal Register**, 58 FR 17405, a proposed consent agreement with analysis In the Matter of AE Clevite, Inc., for the purpose of soliciting public comment. Interested parties were given sixty (60) days in which to submit comments, suggestions or objections regarding the proposed form of the order.

No comments having been received, the Commission has ordered the issuance of the complaint in the form contemplated by the agreement, made its jurisdictional findings and entered an order to cease and desist, as set forth in the proposed consent agreement, in disposition of this proceeding.

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interprets or applies sec. 5, 38 Stat. 719, as amended; 15 U.S.C. 45)

Donald S. Clark,

Secretary.

[FR Doc. 93–15550 Filed 6–30–93; 8:45 am]

BILLING CODE 6750–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Recommendations for Anabolic Steroids Under Section 1903 of the Anabolic Steroids Control Act of 1990; Delegation of Authority

Notice is hereby given that I have delegated to the Assistant Secretary for Health, with authority to redelegate, the authority vested in the Secretary of Health and Human Services under section 1903(a) of the Anabolic Steroids Control Act of 1990, title XIX of Public Law 101–647, as amended hereafter. This delegation excludes the authority to submit reports to Congress.

This delegation became effective upon the date of signature. In addition, I have affirmed and ratified any actions taken by the Assistant Secretary for Health or his subordinates which, in effect, involved the exercise of the authorities delegated herein prior to the effective date of the delegation.

Dated: June 22, 1993.

Donna E. Shalala,

Secretary.

[FR Doc. 93–15604 Filed 6–30–93; 8:45 am]

BILLING CODE 4160–01–M

Comprehensive Drug Abuse Prevention and Control Act of 1970, Public Law 91–513, As Amended; Delegation of Authority

Notice is hereby given that I have delegated to the Assistant Secretary for Health, with authority to redelegate, the authority to perform the functions for which the Secretary of Health and Human Services is responsible under the Comprehensive Drug Abuse Prevention and Control Act of 1970, Public Law 91–513, as amended hereafter. This delegation excludes the authority to submit reports to Congress.

This delegation supersedes the November 28, 1972 delegation from the Secretary to the Assistant Secretary for Health and Scientific Affairs for the Comprehensive Drug Abuse Prevention and Control Act of 1970, Public Law 91–513, as amended. This delegation became effective upon the date of signature. In addition, I have affirmed and ratified any actions taken by the Assistant Secretary for Health or his subordinates which, in effect, involved the exercise of the authorities delegated herein prior to the effective date of the delegation.

Dated: June 22, 1993.

Donna E. Shalala,

Secretary.

[FR Doc. 93–15603 Filed 6–30–93; 8:45 am]

BILLING CODE 4160–01–M

Food and Drug Administration

[Docket No. 93M–0004]

Tosoh Medics, Inc.; Premarket Approval of AIA-PACK AFP

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing its approval of the application by Tosoh Medics, Inc., South San Francisco, CA, for premarket approval, under section 515 of the Federal Food, Drug, and Cosmetic Act (the act), of AIA-PACK AFP. FDA's Center for Devices and Radiological Health (CDRH) notified the applicant, by letter of December 18, 1992, of the approval of the application.

DATES: Petitions for administrative review by August 2, 1993.

ADDRESSES: Written requests for copies of the summary of safety and effectiveness data and petitions for administrative review to the Dockets Management Branch (HFA–305), Food and Drug Administration, rm. 1–23, 12420 Parklawn Dr., Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Peter E. Maxim, Center for Devices and Radiological Health (HFZ–440), Food and Drug Administration, 1390 Piccard Dr., Rockville, MD 20857, 301–427–1034.

SUPPLEMENTARY INFORMATION: On September 27, 1991, Tosoh Medics, Inc., South San Francisco, CA 94080, submitted to CDRH an application for premarket approval of AIA-PACK AFP. The device is a immunoenzymometric assay and is indicated for the quantitative measurement of alpha-fetoprotein (AFP) in serum to aid in the management of patients with nonseminomatous testicular carcinoma.

In accordance with the provisions of section 515(c)(2) of the act (21 U.S.C. 360e(c)(2)) as amended by the Safe Medical Devices Act of 1990, this PMA was not referred to the Immunology Devices Panel, an FDA advisory panel, for review and recommendation because the information in the PMA substantially duplicates information previously reviewed by this panel. On December 18, 1992, CDRH approved the application by a letter to the applicant from the Acting Director of the Office of Device Evaluation, CDRH.

A summary of the safety and effectiveness data on which CDRH based its approval is on file in the Dockets Management Branch (address above) and is available from that office upon written request. Requests should be identified with the name of the device and the docket number found in brackets in the heading of this document.

Opportunity for Administrative Review

Section 515(d)(3) of the act (21 U.S.C. 360e(d)(3)) authorizes any interested person to petition, under section 515(g) of the act (21 U.S.C. 360e(g)), for administrative review of CDRH's decision to approve this application. A petitioner may request either a formal hearing under part 12 (21 CFR part 12) of FDA's administrative practices and procedures regulations or a review of the application and CDRH's action by an independent advisory committee of experts. A petition is to be in the form of a petition for reconsideration under § 10.33(b) (21 CFR 10.33 (b)). A petitioner shall identify the form of review requested (hearing or independent advisory committee) and shall submit with the petition supporting data and information showing that there is a genuine and substantial issue of material fact for resolution through administrative review. After reviewing the petition, FDA will decide whether to grant or deny the petition and will publish a

notice of its decision in the **Federal Register**. If FDA grants the petition, the notice will state the issue to be reviewed, the form of the review to be used, the persons who may participate in the review, the time and place where the review will occur, and other details.

Petitioners may, at any time on or before August 2, 1993, file with the Dockets Management Branch (address above) two copies of each petition and supporting data and information, identified with the name of the device and the docket number found in brackets in the heading of this document. Received petitions may be seen in the office above between 9 a.m. and 4 p.m., Monday through Friday.

This notice is issued under the Federal Food, Drug, and Cosmetic Act (secs. 515(d), 520(h) (21 U.S.C. 360e(d), 360j(h))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10) and redelegated to the Director, Center for Devices and Radiological Health (21 CFR 5.53).

Dated: June 21, 1993.

Joseph A. Levitt,

Deputy Director for Regulations Policy, Center for Devices and Radiological Health.

[FR Doc. 93-15555 Filed 6-30-93; 8:45 am]

BILLING CODE 4160-01-F

Substance Abuse and Mental Health Services Administration

Cooperative Agreement With the Metropolitan Washington Council of Governments (COG)

AGENCY: Substance Abuse and Mental Health Services Administration (SAMHSA), HHS.

ACTION: Notice of intent to award a sole source, cost shared, demonstration cooperative agreement to support development of a model comprehensive substance abuse treatment program for the National Capital area.

SUMMARY: The Center for Substance Abuse Treatment (CSAT), SAMHSA, is publishing this notice to provide information to the public regarding a planned sole source, cost shared, cooperative agreement award to the Metropolitan Washington Council of Governments (COG) for the development and implementation of a model substance abuse treatment demonstration program. The project period is presently anticipated to be three years long. The first year will be funded with approximately $2,700,000 in Federal funds and approximately $1,350,000 in non-Federal cost sharing. This is not a request for applications. The cooperative agreement will only be made to the Metropolitan Washington Council of Governments.

AUTHORITY: The award will be made under the authority of section 571 of the Public Health Service (PHS) Act. That section requires the Secretary of Health and Human Services (HHS) to fund the establishment of a model comprehensive substance abuse treatment demonstration program in the National Capital Area. The National Capital Area, as defined in the legislation, includes the District of Columbia; the counties of Arlington and Fairfax in Virginia; the cities of Alexandria, Falls Church, and Fairfax in Virginia; and (d) the counties of Montgomery and Prince George's in Maryland (and the political subdivisions located in those counties). The authority to administer this program has been delegated to the Director, CSAT.

It is CSAT's best judgement that the award should be made on a sole source basis to COG since only COG is capable of fully satisfying the eligibility and performance requirements included in section 571 of the PHS Act. The statute limits eligibility to "an organization of the general-purpose local governments within the national capital area, or another public or nonprofit private entity, and the applicant submits to the Secretary assurances satisfactory to the Secretary that, with respect to the communities in which services will be offered, the local governments of the communities will participate in the program." The COG is both the only organization of general-purpose local governments for Metropolitan Washington (as defined in the law) and the only organization that can provide reasonable assurance of the participation of all the affected local governments. The statute requires a substantial level of non-Federal contributions: the applicant for the grant must agree, with respect to the costs to be incurred by the applicant in implementing the project, to make available (directly or through donations from public or private entities) non-Federal contributions toward such costs in an amount equal to not less than $1 for each $2 of Federal funds provided. Accordingly, the recipient must be able to document the ability to contribute approximately $1,350,000 in cash or in kind in the first year alone.

CSAT believes it is implicit that the recipient of the funds must be an organization currently accepted as capable of truly representing the governmental interests of all the local jurisdictions in the Washington metropolitan area. Further, it is CSAT's best judgement that to succeed, the new program must receive wide support from government agencies dealing with addiction treatment. Again, COG is the only existing entity that satisfies the above requirements.

BACKGROUND: COG is the recognized regional planning organization for the Metropolitan Washington area. The organization has a long history of administering and coordinating complex projects supported by Federal funds, including several prior DHHS demonstration grants. COG serves as the Title X Family planning grant recipient for the District of Columbia (the only "State" that is a member) administering and coordinating services delivered by six delegate agencies. COG is the Federally designated Metropolitan Planning Organization for developing and implementing an area-wide regional transportation planning program. COG serves as the convener of committees in human services areas in addition to substance abuse that deal with inter-jurisdictional concerns (e.g., juvenile justice).

COG has a Drug Intervention, Treatment and Rehabilitation Committee that is comprised of the local government substance abuse administrators in the COG member jurisdictions. This committee has been very active in discussing inter-jurisdictional cooperation and has engaged in preliminary planning for joint programs. Their deliberations have been brought to the attention of the Congress and considered in the development of the authorizing statute. None of the units of State or local government are seen as appropriate, because of their limited geopolitical responsibilities and connections to a specific, sometimes limited systems of care and reimbursement. Nor is there a non-governmental treatment provider or any other planning or umbrella agency with authority, experience, or acceptability comparable to COG.

Each jurisdiction contains a variety of alcohol and drug abuse treatment programs. However, each jurisdiction does not necessarily include each type of treatment program. There is little existing inter-State planning of the extensive nature contemplated in the law, although a few of the jurisdictions do purchase specific services (for example, medical detoxification) from providers in neighboring jurisdictions, and several providers operate programs in more than one (but not all) of the affected jurisdictions.

We also note that during the recent period of cutbacks in funds available for substance abuse treatment in the three

States, which affected service availability, there was increased joint planning because of the migration of patients across the county and State lines (e.g., from DC to Prince George's County; from DC and Prince George's County to Alexandria and Fairfax County). The vehicle for these planning discussions was primarily the COG committee.

One of the potential benefits anticipated by the legislation was that this project would prove to be a general model for the United States. Councils of Governments are located throughout the United States. The susceptibility to replication of a program coordinated through a Council of Governments, especially when one of the major issues to be addressed is multi-jurisdictional coordination is thus greatly enhanced.

Again, in accordance with all the above considerations, CSAT has concluded that the Metropolitan Washington Council of Governments, a private, nonprofit organization whose membership is comprised of the local general purpose governments in the Metropolitan Washington area, is uniquely qualified to carry out the project as proposed.

USE OF COOPERATIVE AGREEMENT: As mentioned above, one goal of the legislation is to demonstrate a new service delivery model that can be used by other metropolitan communities in the United States to fund quality addiction treatment across jurisdictional lines. The cooperative agreement mechanism has been chosen to allow Federal participation in the planning and execution of the project, to better allow for transfer of the benefits of this experience to other metropolitan areas and to permit coordination of this project with other CSAT efforts to improve delivery systems in metropolitan areas. Accordingly, Federal staff will participate in the policy development and program planning sessions to assure the interests of replication are adequately represented, to advise of the need for, and participate in, the provision of mandatory technical assistance to participating third parties, and to better control the provision of data determined necessary to conduct the program evaluation mandated by the authorizing legislation.

FOR FURTHER INFORMATION CONTACT: Carol Rest-Mincberg, CSAT/SAMHSA, Rockwall II, room 880, 5600 Fishers Lane, Rockville, MD. 20857. Telephone (301) 443–3820.

Dated: June 25, 1993.

Joseph R. Leone,

Acting Deputy Administrator, Substance Abuse and Mental Health Services Administration.

[FR Doc. 93–15554 Filed 6–30–93; 8:45 am]

BILLING CODE 4162–20–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

Availability of a Draft Recovery Plan for the Atlantic Salt Marsh Snake for Review and Comment

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of document availability.

SUMMARY: The U.S. Fish and Wildlife Service announces the availability for public review of a draft Recovery Plan for the Atlantic Salt Marsh Snake. This species occurs in Volusia, Brevard, and Indian River Counties, Florida in brackish coastal marshes where glasswort and salt grass predominates. The Service solicits review and comment from the public on this draft plan.

DATES: Comments on the draft Recovery Plan must be received on or before August 30, 1993, to receive consideration by the Service.

ADDRESSES: Persons wishing to review the draft Recovery Plan may obtain a copy by contacting the Field Supervisor, U.S. Fish and Wildlife Service, 6620 Southpoint Dr. South, Suite 310, Jacksonville, FL 32216, or calling 904/232–2580. Written comments and materials regarding the plan should be addressed to the Field Supervisor at the same address. Comments and materials received are available for public inspection, by appointment, during normal business hours at this address.

FOR FURTHER INFORMATION CONTACT: Linda Finger at the above address (904/232–2580).

SUPPLEMENTARY INFORMATION:

Background

Restoring an endangered or threatened animal or plant to the point where it is again a secure, self-sustaining member of its ecosystem is a primary goal of the U.S. Fish and Wildlife Service's endangered species program. To help guide the recovery effort, the Service is working to prepare Recovery Plans for most of the listed species native to the United States. Recovery Plans describe actions considered necessary for conservation of the species, establish criteria for the recovery levels for downlisting or delisting them, and estimate time and cost for implementing the recovery measures needed.

The Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) requires the development of Recovery Plans for listed species unless such a Plan would not promote the conservation of a particular species. Section 4(f) of the Act, as amended in 1988, requires that public notice and an opportunity for public review and comment be provided during Recovery Plan development. The Service will consider all information presented during a public comment period prior to approval of each new or revised Recovery Plan. The Service and other Federal agencies will also take these comments into account in the course of implementing approved Recovery Plans.

The species considered in this draft plan is the Atlantic salt marsh snake (*Nerodia clarkii taeniata*). This snake, listed as a threatened species, may be restricted to the brackish, coastal marshes of Volusia County, Florida, but probably ranges into Brevard and Indian River Counties. The major threats to this species are habitat loss and the accompanying disruption of reproductive isolating mechanisms, which could lead to hybridization with freshwater broad-banded water snakes. Major objectives of this Recovery Plan include determining the taxonomic status and extent of hybridization, mapping the species' distribution and relative abundance in occupied habitats, determining the extent of current and historic habitat, identifying habitat protection measures, conducting basic ecological research, and educating the public and landowners about Atlantic salt marsh snakes.

Public Comments Solicited

The Service solicits written comments on the Recovery Plan described. All comments received by the date specified above will be considered prior to approval of the Plan.

Authority

The authroity for this action is Section 4(f) of the Endangered Species Act, 16 U.S.C. 1533(f).

Dated: June 23, 1993.

David J. Wesley,

Field Supervisor.

[FR Doc. 93–15552 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–55–M

Receipt of Applications for Permit

The following applicants have applied for a permit to conduct certain

activities with endangered species. This notice is provided pursuant to Section 10(c) of the Endangered Species Act of 1973, *as amended* (16 U.S.C. 1531, *et seq.*):

PRT–667512

Applicant: Howard S. Shellhammer, San Jose State University, San Jose, CA.

The applicant requests a permit to live trap, ear-tag, and release of giant kangaroo rat (*Dipodomys ingens*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), and San Joaquin kit fox (*Vulpes macrotis mutica*) in the San Joaquin Valley to the east of San Jose, California, for the purpose of scientific research.

PRT–779984

Applicant: Kenneth Glander, Duke University Primate Center, Durham, NC.

The applicant requests a permit to import 22 skeletons and 27 fetuses and infant cadavers of wild Mantled howling monkey (*Alouatta palliata*) that died of natural causes in Costa Rica for scientific research aimed at the enhancement of survival of the species.

PRT–777425

Applicant: International Animal Exchange, Ferndale, MI.

The applicant requests a permit to purchase and ship in foreign commerce one male and one female Lion-tailed macaque (*Macaca silenus*) from the Assiniboine Park Zoo in Canada to the Seoul Grand Park Zoo in Korea for the purpose of enhancement of survival through conservation education.

Written data or comments should be submitted to the Director, U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, room 432, Arlington, Virginia 22203 and must be received by the Director within 30 days of the date of this publication.

Documents and other information submitted with these applications are available for review by any party who submits a written request for a copy of such documents to the following office within 30 days of the date of publication of this notice: U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, room 432, Arlington, Virginia 22203. Phone: (703/358–2104); FAX: (703/358–2281).

Dated: June 25, 1993.

Margaret Tieger,

Acting Chief, Branch of Permits, Office of Management Authority.

[FR Doc. 93–15501 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–55–M

Bureau of Land Management

[CA–010–4210–04, CACA 32128]

Realty Action; Exchange of Public Land in Calaveras County, CA

AGENCY: Bureau of Land Management, Department of Interior.

ACTION: Notice.

SUMMARY: The following described public land (surface and mineral estate) is being considered for exchange under section 206 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1716):

Selected Public Land

Calaveras County

T. 5N., R. 12E., M.D.M.
- Sec. 1: lot 4, W½NE¼SE¼ (including MS 3981)
- Sec. 2: lot 2, MS 2726, and SW¼ NE¼
- Sec. 12: NE¼NE¼
- Sec. 24: lot 2

T. 5N., R. 13E., M.D.M.
- Sec. 6: lot 4

T. 6N., R. 13E., M.D.M.
- Sec. 30: SW¼, All that portion of SW¼ lying Southerly of State Highway 26 and all public land within S½SE¼
- Sec. 31: all public lands
- Sec. 32: SW¼NW¼ (including lot 2)

Containing 900 acres, more or less.

The selected public land described above is hereby segregated from settlement, location and entry under the public land laws and from the mining laws for a period of two years from the date of publication of this notice in the **Federal Register.**

The above land is being considered for possible transfer into private ownership through a nonprofit conservation organization. In exchange, the public would receive private land located on rivers such as the North Fork and South Fork of the American River, and the Merced River, or marshlands and waterfowl habitat located in the California Central Valley. This proposal is considered to be in the public interest and is consistent with current land use plans.

SUPPLEMENTARY INFORMATION: The above described Federal land would be transferred subject to a reservation to the United States for ditches and canals; also any rights-of-way of record would be identified as prior existing rights.

All necessary clearances including clearances for archaeology, and rare plants and animals would be completed prior to any conveyance of title by the U.S.

FOR ADDITIONAL INFORMATION: Contact Mike Kelley at (916) 985–4474 or at the address listed below.

ADDRESSES: For a period of 45 days from publication of this notice in the Federal Register, interested parties may submit comments to the District Manager, c/o Area Manager, Folsom Resource Area, 63 Natoma Street, Folsom, CA 95630.

D.K. Swickard,

Area Manager.

[FR Doc. 93–15465 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–40–M

[MT–070–03–4210–04; M81796 & M81841]

Realty Action; Exchange of Public Lands in Missoula and Granite Counties, MT

AGENCY: Butte District Office, Bureau of Land Management, Interior.

ACTION: Designation of public lands in Missoula and Granite Counties, Montana, for transfer out of Federal ownership via exchange.

SUMMARY: In two prior Notices of Realty Action (19/9/92 and 12/14/92), BLM included isolated public land tracts to be considered in a direct exchange with Champion International and in a pooling exchange with Clearwater Investments, Inc. as the proponent. The goal of the proposed exchanges is more efficient management of the public land through consolidation of ownership and acquisition of lands with high natural resource values.

The following additional public land is being considered for these exchanges pursuant to section 206 of the Federal Land Policy and Management Act of October 21, 1976, as amended by the Federal Land Exchange Facilitation Act of January 24, 1988, 43 U.S.C. 1716.

Principal Meridian, Montana

T. 12 N., R. 14 W.,
- Sec. 26, E½NE¼, SW¼NE¼, NW¼, S½
- Sec. 28, Lots 1–4, SW¼NE¼, S½NW¼, SW¼, W½SE¼
- Sec. 33, E½NE¼

T. 12 N., R. 15 W.,
- Sec. 34, W½W½

T. 13 N., R. 20 W.,
- Sec. 25, Lot 9

These lands are segregated from entry under the mining laws, except the mineral leasing laws, effective upon publication of this notice in the **Federal Register.** The segregative effect will terminate upon issuance of patent, upon publication in the **Federal Register** of termination of the segregation, or 5 years from the date of this publication, whichever comes first.

Final determination of disposal will await completion of an Environmental Assessment. Upon completion of an Environmental Assessment, a Notice of Realty Action shall be published specifying the lands to be exchanged and the lands to be acquired.

DATES: On or before August 16, 1993, interested parties may submit comments to the Butte District Manager, P.O. Box 3388, Butte, MT 59702.

Dated: June 22, 1993.

James R. Owings,

District Manager.

[FR Doc. 93-15467 Filed 6-30-93; 8:45 am]

BILLING CODE 4310-DN-M

[CA-010-03-4332-03]

Temporary Camping and Occupancy Restriction Order for the Caliente Resource Area

AGENCY: Bureau of Land Management, Interior.

ACTION: Establishment of temporary camping and occupancy stay limit restriction order for developed campgrounds and undeveloped lands within the Caliente Resource Area, Bakersfield District, California.

SUMMARY: Persons may camp within designated campgrounds or on undeveloped public lands not closed to camping with the Caliente Resource Area for a total period of not more than twenty-eight days during the calendar year. The previous restriction of fourteen days occupation during a one month period will still apply. The twenty-eight day limit may be reached through a number of separate visits or through two separate periods of continuous occupation consisting of fourteen days each. Camping or occupancy longer than the fourteen days during a one month period or longer than twenty-eight days during the calendar year is now allowed unless authorized by law. Under special circumstances and upon request, the authorized officer may give written permission for extension to the limits. Camping is defined as living in tents, vehicles or shelters such as cabins, huts, shacks, or lean-tos. Occupancy is defined as the taking or holding possession of a camp or residence on public land.

FOR FURTHER INFORMATION CONTACT: James Wesley Abbott, Caliente Resource Area Manager, Caliente Resource Office, 4301 Rosedale Highway, Bakersfield, California 93308.

DATES: This order is in effect on August 1, 1993.

SUPPLEMENTARY INFORMATION: This camping and occupancy stay limit restriction order is established to allow orderly use and administration of public lands and to discourage unauthorized occupancy. This order will expire upon completion and publication of the Record of Decision for the Caliente Resource Management Plan. Authority for this restriction order is contained in CFR title 43, chapter II, part 8360, subparts 8364.1 and 9365.1-2(a). Any person who fails to comply with this restriction order may be subject to a fine not to exceed $1,000 and/or imprisonment not to exceed 12 months. Penalties are contained in CFR title 43, chapter II, part 8360, subpart 8360.0-7.

Dated: June 22, 1993.

Patricia Gradek,

Caliente Resource Area Manager, Acting.

[FR Doc. 93-15219 Filed 6-30-93; 8:45 am]

BILLING CODE 4310-40-M

[NV-930-4210-06; Nev-042819 and Nev-059798]

Proposed Continuation of Withdrawal; Nevada

June 21, 1993.

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The Bureau of Reclamation proposes that 148,223 acres of the Stillwater and Carson Lake Pasture areas of the Newlands Project withdrawal be continued for an additional 50 years and 9,967 acres of the Robert B. Griffith Water Project be continued for an additional 20 years. The lands will remain closed to surface entry and mining.

DATES: Comments should be received by September 29, 1993.

ADDRESSES: Comments should be sent to: Chief, Branch of Lands and Minerals Operations, Bureau of Land Management, P.O. Box 12000, Reno, Nevada 89520.

FOR FURTHER INFORMATION CONTACT: Vienna Wolder, Nevada State Office, 702-785-6526.

SUPPLEMENTARY INFORMATION: The Bureau of Land Management proposes that a portion of the existing land withdrawals made by Secretarial Orders July 2, 1902; June 8, 1904; August 4, 1904; February 7, 1905; April 28, 1905; February 6, 1906; April 20, 1907; May 10, 1907; September 30, 1907; November 29, 1907; December 2, 1907; January 3, 1908; March 6, 1908; April 21, 1908; November 4, 1909; March 20, 1915; January 14, 1921; January 16, 1924; November 6, 1925; August 26, 1926; January 3, 1947; February 25, 1952, be continued for a period of 50 years and a portion of Public Land Order 3512 of December 7, 1964, be continued for a period of 20 years pursuant to Section 204 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2751, 43 U.S.C. 1714. The land is described as follows:

Mount Diablo Meridian

Newlands Project—Stillwater Area (Nev-042819)

T. 19 N., R. 29 E.,
Sec. 1, lots 1-3, S½NE¼, SE¼NW¼, S½;
Sec. 3, SW¼;
Sec. 4, SE¼;
Sec. 5, lots 3 and 4, S½NW¼, SW¼;
Sec. 6, lots 1-7, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
Sec. 7, lots 1-4, NE¼, E½NW¼, E½SW¼, W½SE¼;
Sec. 9, E½E½;
Sec. 10;
Sec. 11, NW¼, S½;
Sec. 12, NE¼, S½;
Sec. 13, N½, N½S½;
Sec. 14;
Sec. 15, E½, E½W½;
Sec. 16, SE¼SW¼, S½SE¼;
Sec. 21, NW¼NE¼, S½NE¼, NE¼NW¼, S½NW¼, S½;
Sec. 22, NE¼, NE¼NW¼, S½NW¼, SW¼, N½SE¼, W½NW¼SW¼SE¼;
Sec. 23, N½NE¼, SW¼NE¼, NW¼, N½SW¼, SE¼SE¼SE¼;
Sec. 25, E½SE¼SE¼NE¼;
Sec. 27, W½NE¼NW¼, NW¼NW¼, S½NW¼;
Sec. 28, NE¼,N½NW¼, NW¼SW¼NW¼,N½SW¼SW¼NW¼, E½SW¼NW¼,SE¼NW¼;
Sec. 36, S½SE¼.

T. 19 N., R. 30 E.,
Sec. 2, lot 2, SW¼NW¼;
Sec. 5, lots 1-4, S½N½, S½;
Sec. 6, lots 1-7, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
Sec. 7, lots 1 and 2, NE¼, E½NW¼;
Sec. 18, lot 1, NE¼NW¼;
Sec. 25;
Sec. 26, SE¼SE¼;
Sec. 27, N½NW¼NW¼SW¼;
Sec. 28, NW¼;
Sec. 29, NE¼, S½NW¼;
Sec. 31, lots 3 and 4, E½SW¼, SE¼;
Sec. 32;
Sec. 33, NE¼, W½NW¼, E½SW¼, SE¼;
Sec. 34, S½NE¼, NW¼, S½;
Sec. 35, NE¼, S½NW¼, S½;
Sec. 36.

T. 20 N., R. 29 E.,
Secs. 4, 6 and 8;
Sec. 10, SE¼NE¼, N½NW¼, SW¼NW¼, NE¼SW¼, S½SW¼, SE¼;
Sec. 12;
Sec. 13, NE¼, NE¼NW¼, SW¼NW¼, S½;
Sec. 14, E½, NW¼NW¼, SE¼NW¼, NE¼SW¼, S½SW¼;
Sec. 15, NE¼, E½NW¼, NW¼NW¼, NE¼SW¼, NW¼SE¼, SE¼SE¼;
Sec. 16, W½;
Secs. 18 and 20;
Sec. 21, W½;
Sec. 22, N½NE¼, NE¼NW¼;
Sec.s. 23 to 26, inclusive;
Sec. 27, E½E½, SW¼NE¼, S½NW¼, N½SW¼;
Sec. 28, W½;
Sec.s. 29, 30 and 31;

Sec. 32, N½, SW¼, N½SE¼;
Sec. 33, W½NE¼, NW¼, N½SW¼, N½S½SW¼, N½SE¼,SW¼NE¼;
Sec. 34, NE¼NE¼;
Sec. 35, N½N½N½;
Sec. 36.
T. 21 N., R. 29 E.,
Secs. 1 and 2;
Sec. 3, E½ (portion in Lake);
Sec.s. 4, 6, 8, and 10;
Sec. 11, N½ (portion);
Secs. 12, 14, 16, 18, and 20;
Sec. 22, E½E½, W½SW¼;
Sec. 26, N½, SW¼, N½SE¼, SW¼SE¼;
Sec.s. 28, 30, 32, and 34;
Sec. 36, NE¼, NE¼NW¼, S½NW¼, SW¼, E½SE¼.
T. 22 N., R. 29 E.,
Secs. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, and 36.
T. 23 N., R. 29 E.,
Secs. 24, 26, 32, 34, and 36.
T. 20 N., R. 30 E.,
Secs. 1 to 5, inclusive;
Sec. 6, E½, NW¼NW¼, S½NW¼, S½SW¼;
Secs. 7 to 25, inclusive;
Sec. 26, NW¼, SE¼;
Secs. 27 to 32 inclusive;
Sec. 33, N½;
Sec. 34, NW¼;
Sec. 35, NW¼, E½SE¼;
Sec. 36, NW¼, N½SE¼.
T. 21 N., R. 30 E.,
Secs. 1 to 10, inclusive;
Sec. 11, all except lots 1–4;
Secs. 12 and 14;
Sec. 15, all except lots 1–5, SE¼NE¼, E½SE¼;
Sec. 16;
Sec. 17, all except lots 1–6;
Sec. 18, all except lots 1 and 2;
Secs. 20, 22, 24, 25, 26, and 28;
Sec. 30, lot 4, N½, SE¼;
Secs. 32, 34, 35, and 36.
T. 22 N., R. 30 E.,
Secs. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, and 36.

The area described aggregates 103,394 acres in Churchill County.

Newlands Project—Carson Lake Pasture Area (Nev–042819)

T. 16 N., R. 29 E.,
Secs. 1 to 6, inclusive;
Sec. 7, Lots 1 and 2, NE¼, E½NW¼;
Secs. 8, 9, 10, 11, and 12 (portion lying within 1 mile of Carson Lake).
T. 17 N., R. 29 E.,
Secs. 1 and 2;
Sec. 3, all, except lots 1–3;
Sec. 9, all, except lots 1–4;
Secs. 10 to 16, inclusive;
Sec. 17, all, except lots 1–5;
Sec. 19, all, except lots 1–4;
Secs. 20 to 36, inclusive.
T. 18 N., R. 29 E.,
Sec. 2, lot 1, SE¼NE¼, N½SE¼;
Sec. 6, NE¼SE¼;
Sec. 12, lot 1, NE¼;
Sec. 18, SE¼SE¼SE¼;
Sec. 35, NE¼NE¼SE¼NW¼, SE¼SE¼SE¼SE¼NW¼, S½SE¼. T. 16 N., R. 30 E.,
Secs. 5 and 6.
T. 17 N., R. 30 E.,
Secs. 5 to 8, inclusive;
Secs. 17 to 20, inclusive;
Secs. 29 to 32, inclusive.
T. 18 N., R. 30 E.,
Secs. 1 to 10, inclusive;
Secs. 16 and 17;
Sec. 18, lots 2–4, SE¼NW¼, E½SW¼, SE¼;
Sec. 19, lot 1, E½, E½W½;
Sec. 20, N½, N½SW¼;
Sec. 29, S½;
Sec. 30, lots 3 and 4, E½, E½W½;
Sec. 31, lots 1, 3 and 4, NE¼, NE¼NW¼, E½SW¼, SE¼;
Sec. 32.

The area described aggregates approximately 44,829 acres in Churchill County.

Robert B. Griffith Water Project (Nev-059798)

T. 21 S., R. 62 E.,
Sec. 23, NE¼NE¼, E½SE¼;
Sec. 24;
Sec. 25, N½NE¼, SE¼NE¼, NE¼NW¼.
T. 21 S., R. 63 E.,
Sec. 19, lots 3 and 4, E½SW¼;
Sec. 25;
Sec. 26, lots 1 and 2, and two 250-foot-wide land corridors paralleling and contiguous to both sides of Lake Mead Drive road right-of-way;
Sec. 27, S½SE¼;
Sec. 28, SE¼NE¼, N½NW¼, SE¼SW¼, SE¼;
Sec. 29, N½NE¼, NW¼, S½SW¼;
Sec. 30, lots 1, 2, 4, NE¼, E½NW¼, SE¼SW¼, S½SE¼;
Sec. 34, lots 1 to 6, inclusive, SW¼NE¼, SE¼SE¼NW¼, S½SW¼NW¼, S½SW¼SE¼NW¼, E½SW¼, E½NW¼SW¼, S½NW¼NW¼SW¼, SW¼NW¼SW¼, and one 250-foot-wide land corridor paralleling and contiguous to the northerly side of the Lake Mead Drive road right-of-way;
Sec. 35, lots 1, 2, 3, 6, 7, SE¼SE¼;
Sec. 36, S½.
T. 22 S., R. 63 E.,
Sec. 1, lots 5, 6, 7, 8, S½N½, S½;
Sec. 2, lots 5, 6, 7, 8, S½N½, S½;
Sec. 3, lots 5, 6, 7, 8, S½N½, S½;
Sec. 10;
Sec. 14;
Sec. 15;
Sec. 23, W½;
Sec. 26, W½;
Sec. 35.
T. 23 S., R. 63 E.,
Sec. 2, lots 3, 5, 6, 7, 11 to 15, inclusive, S½SW¼;
Sec. 11, lot 1, that portion lying west of land deeded to the City of Boulder City, Nevada, by quitclaim deed dated January 4, 1960; lot 2.
T. 22 S., R. 63½ E.,
Sec. 1, lots 1 to 6, inclusive, S½NE¼, SE¼.

The area described aggregates approximately 9,967 acres in Clark County.

The Newlands Project was established to provide irrigation water from the Truckee and Carson Rivers for the lower Carson Valley near Fallon. The lands are used for the collection and ponding of drainage water from the Project. The Robert B. Griffith Water Project (formerly known as the Southern Nevada Water Project) was established to provide southern Nevada with water from the Colorado River or other sources for municipal and industrial users. The withdrawals segregate the land from operation of the public land laws generally, including the mining laws, but not the mineral leasing laws. For a period of 90 days from the date of publication of this notice, all persons who wish to submit comments in connection with the proposed continuation of the withdrawals may present their views in writing to the Chief, Branch of Lands and Minerals Operations, in the Nevada State Office. The authorized officer of the Bureau of Land Management will undertake such investigations as are necessary to determine the existing and potential demand for the land and its resources. A report will also be prepared for consideration by the Secretary of the Interior, the President, and Congress, who will determine whether or not the withdrawals will be continued and if so, for how long. The final determination on the continuation of the withdrawals will be published in the **Federal Register**. The existing withdrawals will continue until such final determination is made.

Robert G. Steele,
Deputy State Director, Operations.

[FR Doc. 93–15468 Filed 6–30–93; 8:45 am]

BILLING CODE 4310–HC–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 701–TA–319–332, 334, 336–342, 347–353; and 731–TA–573–579, 581–592, 594–597, 599–609, and 612–619]

Notice of Commission Determination To Conduct a Portion of the Hearing In Camera

In the Matter of Certain Flat-Rolled Carbon Steel Products

AGENCY: U.S. International Trade Commission.

ACTION: Closure of a portion of a Commission hearing to the public.

SUMMARY: Upon motion of a group of respondents in the above-captioned final investigations, the Commission has unanimously determined to conduct a portion of its hearing scheduled for June 29 and 30, 1993, *in camera*. See Commission rules 201.13 and 201.35(b)(3) (19 C.F.R. § 201.13 and 201.35(b)(3)). The remainder of the hearing will be open to the public.

FOR FURTHER INFORMATION CONTACT: Cynthia P. Johnson, Esq., Office of the General Counsel, U.S. International Trade Commission, telephone 202–205–3098. Hearing impaired individuals are advised that information on this matter may be obtained by contacting the Commission's TDD terminal on (202) 205–1810.

SUPPLEMENTARY INFORMATION: The Commission believes that unusual circumstances are present in these investigations so as to make it appropriate to hold a portion of the hearing *in camera*. In light of the desirability of affording a full discussion at the hearing of business proprietary information (BPI) concerning (1) allegations made by certain respondents in this investigation in a letter dated June 14, 1993; (2) confidential pricing data; (3) confidential data regarding niche products, the Commission has determined to reserve one hour of the time allotted for respondents presentation to the discussion of these matters. In making this decision, the Commission nevertheless reaffirms its belief that whenever possible, its business should be conducted in public.

Authority: The General Counsel has certified, pursuant to Commission Rule 201.39 (19 CFR 201.39) that, in her opinion, a portion of the Commission's hearing in the above-captioned investigation be closed to the public to prevent the disclosure of business proprietary information.

Issued: June 25, 1993.

By order of the Commission.

Paul R. Bardos,

Acting Secretary.

[FR Doc. 93–15495 Filed 6–30–93; 8:45 am]

BILLING CODE 7020–02–P

INTERSTATE COMMERCE COMMISSION

Release of Waybill Data

The Commission has received a request from the DRI/McGraw-Hill for permission to use certain data from the 1991 ICC Waybill Sample.

A copy of the request (WB420—5/29/93) may be obtained from the ICC Office of Economics.

The waybill sample contains confidential railroad and shipper data; therefore, if any parties object to this request, they should file their objections (an original and 2 copies) with the Director of the Commission's Office of Economics within 14 calendar days of the date of this notice. The rules for release of waybill data [Ex Parte 385 (Sub-No. 2)] are codified at 49 CFR 1244.8.

Contact: James A. Nash (202) 927–6196.

Sidney L. Strickland, Jr.,

Secretary.

[FR Doc. 93–15553 Filed 6–30–93; 8:45 am]

BILLING CODE 7035–01–M

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

Manufacturer of Controlled Substances; Registration

By Notice dated April 15, 1993, and published in the **Federal Register** on April 28, 1993, (58 FR 25848), Johnson Matthey Inc., Custom Pharmaceuticals Department, 2002 Nolte Drive, West Deptford, New Jersey 08066, made application to the Drug Enforcement Administration to be registered as a bulk manufacturer of the basic classes of controlled substances listed below:

Drug	Schedule
Hydromorphone (9150)	II
Morphine (9300)	II

A registered manufacturer did file a written request for a hearing with respect to Hydromorphone. Therefore, pursuant to section 303 of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and title 21, Code of Federal Regulations, § 1301.54(e), the Director hereby orders that the application submitted by the above firm for registration as a bulk manufacturer of the basic class of controlled substance listed above is granted with the exception of Hydromorphone.

Dated: June 22, 1993

Gener R. Haislip,

Director, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. 93–15480 Filed 6–30–93; 8:45 am]

BILLING CODE 4410–09–M

Manufacturer of Controlled Substances; Registration

By Notice dated April 23, 1993, and published in the **Federal Register** on May 3, 1993, (58 FR 26353), Radian Corporation, P.O. Box 201088, 8501 Mopac Blvd., Austin, Texas 78759, made application to the Drug Enforcement Administration to be registered as a bulk manufacturer of the basic classes of controlled substances listed below:

Drug	Schedule
Methcathinone (1237)	I
Aminorex (1585)	I
4-Methlaminorex (cis isomer) (1590).	I
Methaqualone (2565)	I
Lysergic acid diethylamide (7315).	I
Tetrahydrocannabinols (7370)	I
Mescaline (7381)	I
3,4-Methylenedioxy- amphetamine (7400).	I
3,4-Methylenedioxy- methamphetamine (7405).	I
Normorphine (9313)	I
Amphetamine (1100)	II
Methamphetamine (1105)	II
Methylphenidate (1724)	II
Amobarbital (2125)	II
Pentobarbital (2270)	II
Secobarbital (2315)	II
Phencyclidine (7471)	II
Hydromorphone (9150)	II
Benzoylecgonine (9180)	II
Hydrocodine (9193)	II
Meperidine (9230)	II
Methadone (9250)	II
Fentanyl (9801)	II

Registered manufacturers did file an objection to the registration of Radian Corporation with respect to hydromorphone and Methylphenidate. The firms subsequently withdrew their objection after Radian Corporation stated that it would only manufacture a small quantity of the deuterated form of hydromorphone and methylphenidate which will be sold as ananalytical reference standard. Therefore, pursuant to section 303 of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and title 21, Code of Federal Regulations, § 1301.54(e), the Director hereby orders that the application submitted by the above firm for registration as a bulk manufacturer of the basic classes of controlled substances listed above is granted.

Dated: June 22, 1993.

Gene R. Haislip,

Director, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. 93–15481 Filed 6–30–93; 8:45 am]

BILLING CODE 4410–09–M

Manufacturer of Controlled Substances; registration

By Notice dated April 23, 1993, and published in the **Federal Register** on May 7, 1993, (58 FR 27310). Roche Diagnostic Systems, Inc., 1080 U.S. Highway 202, Branchburg, New Jersey 08876, made application to the Drug Enforcement Administration to be registered as a bulk manufacturer of the basic classes of controlled substances listed below:

Drug	Schedule
Lysergic acid diethylamide (7315).	I
Tetrahydrocannabinols (7370) ...	I
Phencyclidine (7471)	II
Methadone (9250)	II

No comments or objections have been received. Therefore, pursuant to section 303 of the Comprehensive Drug Abuse Prevention and Control Act of 1970 and title 21, Code of Federal Regulations, § 1301.54(e), the Director hereby orders that the application submitted by the above firm for registration as a bulk manufacturer of the basic class of controlled substance listed above is granted.

Dated: June 22, 1993.

Gene R. Haislip,

Director, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. 93-15479 Filed 6-30-93; 8:45 am]

BILLING CODE 4410-09-M

Importer of Controlled Substances; Registration

By Notice dated February 24, 1993, and published in the **Federal Register** on March 8, 1993, (58 FR 12975), Sanofi Winthrop LP, DBA Sanofi Winthrop Pharmaceutical, 200 East Oakton Street, Des Plaines, Illinois 60018, made application to the Drug Enforcement Administration to be registered as an importer of the basic classes of controlled substances listed below:

Drug	Schedule
Codeine (9050)	II
Hydromorphone (9150)	II
Meperidine (9230)	II
Morphine (9300)	II
Fentanyl (9801)	II

A registered manufacturer did file a request for a hearing with respect to the controlled substances listed above. The firm subsequently withdrew its request after representatives of the firms signed a Stipulation. Therefore, pursuant to section 1008(a) of the Controlled Substances Import and Export Act and in accordance with title 21, Code of Federal Regulations § 1311.42, the above firm is granted registration as an importer of the basic classes of controlled substances listed above.

Dated: June 22, 1993.

Gene R. Haislip,

Director, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. 93-15478 Filed 6-30-93; 8:45 am]

BILLING CODE 4410-09-M

DEPARTMENT OF LABOR

Pension and Welfare Benefit Programs

[Application Nos. L-9393 and D-9394]

Navistar International Transportation Corporation (Navistar) Located in Chicago, IL and International Union, United Automobile, Aerospace, and Agricultural Implement Workers of America (UAW) Located in Detroit, MI

AGENCY: Department of Labor

ACTION: Notice of Proposed Exemption

SUMMARY: This document contains a notice of pendency before the Department of Labor (the Department) of a proposed exemption from certain of the prohibited transaction restrictions of the Employee Retirement Income Security Act of 1974 (the Act).

EFFECTIVE DATE: If the proposed exemption is granted, the exemption will be effective July 1, 1993.

DATES: Written comments and requests for a public hearing must be received by the Department of Labor on or before the expiration of August 16, 1993.

ADDRESSES: All written comments and requests for a hearing (at least three copies) should be sent to the Office of Exemption Determinations, Pension and Welfare Benefits Administration, room N-5649, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, Attention: Application Nos. L-9393 and D-9394. The application for exemption and the comments received will be available for public inspection in the Public Documents Room of the Pension and Welfare Benefits Administration, U.S. Department of Labor, room N-5507, 200 Constitution Avenue, N.W., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Lyssa E. Hall of the Department of Labor, telephone (202) 219-8971. (This is not a toll-free number.)

SUPPLEMENTARY INFORMATION: Notice is hereby given of the pendency before the Department of an application for exemption from the restrictions of sections 406(a), 406(b)(1), 406(b)(2) and 407(a) of the Act. The proposed exemption was requested in an application filed by Navistar and the UAW, pursuant to section 408(a) of the Act and in accordance with procedures set forth in 29 CFR part 2570, subpart B (55 FR 32836, 32847, August 10, 1990).

Proposed Exemption

The Department is considering granting an exemption under the authority of section 408(a) of the Act and in accordance with the procedures set forth in 29 CFR part 2570, subpart B (55 FR 32836, 32847, August 10, 1990). If the exemption is granted, the restrictions of sections 406(a), 406(b)(1), 406(b)(2) and 407(a) of the Act shall not apply to (1) the acquisition and holding by the Navistar International Transportation Corporation Retiree Health Benefit and Life Insurance Plan (the New Plan) of shares of Class B Common Stock and Series A Preference Stock of Navistar International Corporation (NIC); (2) the holding by the New Plan of shares of NIC Common Stock resulting from the conversion of NIC Class B Common Stock into such shares; (3) the extension of credit between Navistar and the New Plan, which may occur in conjunction with Navistar's annual obligation to advance funds to the Supplemental Benefit Program Trust; and (4) the sale of shares of NIC Class B Common Stock by the New Plan to Navistar, provided that:

(a) All decisions regarding the management of the Supplemental Benefit Program Trust, including determinations affecting NIC stock held by such trust, are made by the Supplemental Program Committee;

(b) The Supplemental Program Committee will take whatever action is necessary to protect the New Plan's rights with respect to the proposed transaction;

(c) With respect to the sale of NIC Class B Common Stock by the New Plan to Navistar, each Class B share will be valued at the average closing price per share of NIC Common Stock during the 30 day trading period immediately prior to the date Navistar acquires the Class B Shares, but in no case will the price be less than adequate consideration as defined in section 3(18) of the Act;

(d) Navistar or NIC shall maintain, for a period of six years, the records necessary to enable the persons described in paragraph (e) below to determine whether the conditions of this exemption have been met, except that (a) a prohibited transaction will not be considered to have occurred if, due to circumstances beyond the control of NIC and/or its affiliates, the records are lost or destroyed prior to the end of the six year period, and (b) no party in interest other than NIC or Navistar shall be subject to the civil penalty that may be assessed under section 502(i) of the Act if the records are not maintained, or are not available for examination as required by paragraph (e) below; and

(e)(1) Except as provided in section (2) of this paragraph and notwithstanding any provisions of subsections (a)(2) and (b) of section 504 of the Act, the records referred to in paragraph (d) above shall be

unconditionally available at their customary location during normal business hours by:

(A) Any duly authorized employee or representative of the Department;

(B) The UAW or any duly authorized representative of the UAW;

(C) Any participant or beneficiary of the New Plan, or any duly authorized representative of such participant or beneficiary.

(2) None of the persons described above in subparagraphs (B) and (C) of this paragraph (e) shall be authorized to examine the trade secrets of NIC or Navistar or commercial or financial information which is privileged or confidential.

For purposes of this exemption:

(1) The majority of the members of the Supplemental Program Committee will be individuals who:

(a) Are not affiliates of Navistar, NIC or the UAW;

(b) Do not have any ownership interest in Navistar or NIC,

(c) Are not officers, directors, or 5 percent or more shareholders or partners of a person in which NIC has any ownership interest;

(d) Have acknowledged in writing acceptance of fiduciary responsibility;

(e) Do not receive more than 5 percent of their annual gross income (excluding retirement income) for any taxable year in the aggregate from Navistar, UAW, any affiliates thereof; and

(f) Will not acquire any property from, sell any property to or borrow any funds from NIC, UAW, or any affiliate thereof, during the period that such individual serves as a member of the Supplemental Program Committee and continuing for a period of 6 months after such individual ceases to be a member of the Supplemental Program Committee or negotiate any such transaction during the period that such individual serves as a member of the Supplemental Program Committee.

(2) An Affiliate of another person means:

(a) Any person directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with such other person;

(b) Any officer, director, partner, employee, relative (as defined in section 3(15) of the Act), a brother, a sister, or a spouse of a brother or sister of such other person; and

(c) Any corporation or partnership of which such other person is an officer, director or partner.

(3) Control means the power to exercise a controlling influence over the management or policies of a person other than an individual.

Summary of Facts and Representations

The application contains representations with regard to the proposed exemption which are summarized below. Interested persons are referred to the application on file with the Department for the complete representations of the applicant.

1. International Harvester, the first large scale inventor of agricultural equipment and machinery, was founded in 1831 and is one of the oldest companies in America. In 1986, International Harvester sold its agricultural machinery business and was renamed Navistar. Navistar, a Delaware Corporation headquartered in Chicago, Illinois, is the largest North American manufacturer of large and medium size trucks and mid-range diesel engines.

2. Navistar International Corporation (NIC) is a publicly-traded corporation which wholly owns Navistar. In addition to Navistar, NIC wholly owns Navistar Financial Corporation, which provides both wholesale and retail financing for purchasers of Navistar products, and several small foreign finance and property insurance subsidiaries.

3. The International Union, United Automobile, Aerospace, and Agricultural Implement Workers of America (UAW) is an unincorporated labor association headquartered in Detroit, Michigan. The UAW is currently the lead negotiator with respect to a class action filed against Navistar on behalf of the retirees in the Navistar retiree welfare benefits plan. Navistar currently provides health and life insurance benefits to approximately 63,000 retirees, surviving spouses and dependents.[1]

The subject of the class action, described further in paragraph 11, is Navistar's proposed termination of its current retiree health and life insurance benefit program and the substitution of a new plan with a reduced schedule of benefits. The New Plan was negotiated between Navistar and the UAW in settlement of the class action filed against Navistar by the Navistar retirees.

4. During its early years, International Harvester, now Navistar, offered its employees a comprehensive retiree health benefits program as a reward for their dedication and years of service to the company. Navistar's current retiree population has accrued and earned those benefits which they believed were to be provided for their lives and the lives of their spouses. However, the Applicants represent that Navistar is on the brink of insolvency due to the burden of its current health benefits program. As a result of significant downsizing in the 1980's, Navistar is no longer large enough to generate sufficient income to pay for the benefits provided for under their current health benefits program. Navistar currently has a far greater number of retirees relative to its sales, asset base and the number of active employees than any of its competitors or suppliers because, as Navistar sold or closed its facilities, it retained its obligation to pay for health and life insurance benefits for retirees at those facilities. Navistar currently employs about 14,000 employees (down from 98,000 in 1979), but as noted above, provides health care benefits to approximately 63,000 retirees, surviving spouses and dependents. The ratio of Navistar active employees to retirees (excluding spouses and dependents) is 3.3 to 1. The current monthly outlay for the health and welfare benefits program is $13 million.

5. Navistar has historically accounted for its retiree health obligations on a pay as you go basis and has not pre-funded its retiree health liabilities. Independent actuarial consultants have calculated Navistar's Accumulated Post-Retirement Benefit Obligation (APBO) under statement of Financial Accounting Standards No. 106.—Employers' Accounting for Post-Retirement Benefits (SFAS 106) at $2.6 billion, an amount greater than 750 percent of Navistar's net worth.[2] By contrast, the APBO liability of most of Navistar's competitors ranges from 1 to 130 percent of their net worth.

6. The Applicants represent that in 1991 Navistar's EBRIT[3] profits were $59 million, and $138 million was spent on retiree health care. In 1992 EBRIT was $52 million, and $146 million was spent on retiree health care. Over the last three years, Navistar's retiree health costs have exceeded EBRIT by $548 million.

7. The applicants represent that at the end of October 1989, Navistar had a cash balance of $530 million. By October 31, 1992, this balance deteriorated to $250 million. As of January 31, 1993, Navistar's cash balance had declined to $150 million. If

[1] Approximately 36,000 of the 63,000 retirees (including their surviving spouses and dependents) were previously represented by the UAW, 20,000 were not represented by any union at the time of their retirement and 7,000 were previously represented by approximately 25 other unions.

[2] In its annual report for fiscal year 1992, Navistar showed a balance sheet net worth of $338 million.

[3] EBRIT, as used here, means earnings before retirement costs, interest and taxes, where retirement costs equal the sum of pension costs per active and retired employees and health care costs for retirees only.

Navistar is unable to reduce its retiree costs, the company will be insolvent prior to the end of 1993. If this occurs, the 63,000 Navistar retirees, surviving spouses and dependents will likely lose all company paid welfare benefits.

8. The applicants represent that Navistar's economic problems are not the result of its products or its marketing and service system. Navistar's financial performance during each of the last three fiscal years compares favorably to its competitors when measured by the results of operations exclusive of retiree costs. Navistar's EBRIT as a percentage of sales was 5.6 percent, which is comparable to the 5.8 percent figure shown by PACCAR (the only other truck company that reports operating income from truck manufacturing exclusively), and more favorable than the weighted average figure of 5.2 percent for the "Big Three" automobile manufacturers. Navistar's market position remains strong in all business segments, and it is particularly well-positioned in medium trucks and diesel engines. In 1991, Navistar captured a 38.3 percent share of the North American combined medium truck and bus market, the largest of any truck manufacturer, foreign or domestic. In 1992, it remained the North American Market leader with 36.9 percent. By comparison, its nearest competitor, General Motors, retained only 26.6 percent of the market. Among medium-sized diesel trucks, which now command 78.9 percent of the medium truck market (up from 60.7 percent in 1985), Navistar's market share totalled approximately 46.0 percent. Among heavy truck manufacturers Navistar is also a North American Market leader, with 23.0 percent of the market in 1991, and 21.3 percent in 1992. In addition, Navistar leads the world in production of mid-range diesel engines, producing 160,000 units in 1990.

9. Faced with the impending financial crisis described above, on July 28, 1992, Navistar announced the termination of its retiree health benefits program and the adoption of a new less costly plan. That same day, Navistar commenced a class action in federal district court in Chicago (*Navistar International Corporation* v. *Foster*, No. 92C4913 (N.D. Ill. July 28, 1992)) (*Foster*) seeking a declaratory judgment that Navistar was not obligated to continue to provide retiree health benefits and that its decision to terminate the existing program did not violate section 301 of the Labor Management Relations Act (LMRA) or section 502 of ERISA.

10. On August 23, 1992, the UAW, et. al. filed a competing class action against Navistar in federal district court in Ohio (*Shy* v. *Navistar International Corporation*, No. C–3–92–33 (S.D. Ohio August 23, 1992) *Shy*) seeking a declaratory judgment that Navistar's attempt to modify its retiree benefits package violated both section 301 of the LMRA and 502 of ERISA and that Navistar's retirees were entitled to continue to receive the existing health benefits package for life.

11. On October 18, 1992, Navistar and the UAW announced a protocol designed to lead to a negotiated settlement of all retiree health issues. It was also agreed that the UAW would act as the lead negotiator for all Navistar retirees, including the non-represented retirees and those formerly represented by other unions. In addition, Navistar agreed to a voluntary dismissal of *Foster*.

12. After several months of arm's length negotiations, in January 1993, Navistar and the UAW announced the design of a new uniform health benefits plan that would cover all current retirees as well as all currently active employees upon their retirement. The New Plan will constitute settlement of the *Shy* litigation. However, before the New Plan can be implemented, it must be approved by the *Shy* court as fair and reasonable and in the best interests of class members.[4] In addition, because implementation of the New Plan will result in violations of the prohibited transaction provisions of the Act, Navistar and the UAW have expressly conditioned implementation of the *Shy* settlement upon the Department's grant of the exemption described herein.[5]

On May 27, 1993, the *Shy* Court issued a comprehensive opinion in which it approved the terms of the settlement. The Court determined that the New Plan is fair and reasonable, and, as a whole, in the best interest of class members. The Court specifically concluded that the settlement agreement is less burdensome to Navistar's retirees than any other realistic alternative.[6]

14. Pursuant to the New Plan, the applicants represent that Navistar's SFAS 106 APBO will be reduced from $2.6 billion to $1.0 billion. Navistar believes that if it can maintain its SFAS 106 liability at an amount below $1.0 billion, short and long term capital will become available. Also, the pre-funding which is required under the terms of the New Plan will reduce the amount of the monthly contributions that Navistar is required to pay for annual benefits. Navistar's investment bankers believe that when the New Plan is implemented the market place will react favorably, viewing the company as wedding a strong product base to a new employee cost structure proportionate to its sales and asset size.

16. The New Plan will consist of two parts, a Base Benefits Program and the Supplemental Program, each of which will be funded through a separate trust designed to meet the requirements in section 501(c)(9) of the Code for voluntary employees' beneficiary associations (VEBAs).[7]

Under the Base Benefits Program, participants will receive health care benefits and life insurance coverage, but with more limited coverage than Navistar currently provides. Such benefits will be paid from the Base Trust which will be funded, in part, by Navistar's monthly payments for the full

[4] On April 5, 1993, the Court certified a class action consisting of all current and future Navistar retirees and all current non-represented Navistar employees. Pursuant to Fed. R. Civ. P. 23(e), each class member who is a party to a class action is entitled to a notice that fully describes the terms of the proposed settlement and an opportunity to appear at a fairness hearing to discuss the merits of the proposed settlement. Navistar mailed the notice package to all class members on April 7, 1993. The package included (a) a memorandum from class counsel explaining the process that led to the settlement and its basic structure, (2) the notice from the Court discussing the nature of the lawsuit, the terms of the Settlement Agreement, and the right to appear at the May 7, 1993 hearing and object to any portion of the settlement, (3) the Settlement Agreement itself, (4) the ERISA-required summary plan descriptions outlining the terms and conditions of the new retiree health plan, and (5) a separate document that defines certain of the key terms used in the Settlement Agreement and New Plan. The applicants state that the class-counsel memorandum, the Court notice, and the SPDs—each drafted in a manner "calculated to be understood by the average plan participant," see ERISA section 102(a)(1)—will ensure that class members comprehend the terms and conditions of the New Plan and can make an informed judgment as to whether it is a fair and equitable arrangement in light of all the facts and circumstances.

[5] Under the terms of the Settlement Agreement, the New Plan will become effective after (1) the *Shy* Court enters a final judgment approving the Settlement; (2) the exemptions requested by this Application have been granted; (3) Navistar has received IRS private letter rulings or opinions of tax counsel that the Base Trust will receive favorable tax treatment; (4) collective bargaining agreements are ratified which provide that current represented employees will be eligible to participate in the New Plan; and (5) the shareholders of NIC have approved amendments to its Articles of Incorporation that are necessary to implement certain terms of the settlement. If an appeal is taken from the *Shy* Court's decision, and such appeal cannot be heard on an expedited basis, the New Plan may nonetheless be implemented unless a material aspect of the plan is enjoined or counsel opines that it is probable that such appeal will be successful.

[6] The ongoing operation of the New Plan, including the holding of NIC Class B Common Stock, NIC Common Stock and Series A Preference Stock, described in paragraph 19 herein, will be subject to the continuing jurisdiction of the District Court for the Southern District of Ohio.

[7] On May 21, 1993, the IRS issued a private letter ruling to Navistar concluding that the Base Trust and Supplemental Trust will be exempt from federal income tax under section 501(c)(9) of the Code.

cost of the premiums for the life insurance benefit, Navistar's monthly payments for premiums for its share of the health insurance benefit and New Plan participants' payments for their share of the premiums on the health insurance benefits portion of the Base Program. The Base Trust will be pre-funded by NIC with $100 million within six months after implementation of the New Plan.[8] In addition, within five years after implementation of the New Plan, NIC will use its best efforts to pre-fund the Base Trust with $500 million from sales of Common Stock, and, if such best efforts fail, NIC will contribute to the Base Trust the total net proceeds from all such stock sales.[9]

17. Notwithstanding the existence of the Base Trust, Navistar and NIC have irrevocably guaranteed the benefits to be provided under the Base Program. As guarantor, each of them is to act as a primary obligor. In addition, all current retirees, and all current active employees upon their retirement, as well as their dependents and surviving spouses, will receive the Base Program benefits for their lifetime (unless they lose their eligibility by, for example, terminating their dependent status or failing to meet their premium sharing obligations).

18. The Supplemental Program is designed to enable New Plan participants to reduce the costs shifted to them under the Base Benefits Program. The Supplemental Program grants retirees a sufficiently large equity stake in the Company so that they can benefit from the company's future profitability. Amounts in the Supplemental Trust may be used in the future to reduce premiums, deductibles, or co-payment obligations under the Base Benefit Program, or to provide additional benefit coverage.

19. Navistar and the UAW propose that the Supplemental Trust will be funded as follows:

Upon implementation of the New Plan, Navistar will transfer to the Supplemental Trust approximately 255 million shares of a new class of NIC stock (100% of the outstanding shares of this class), known as NIC Class B Common. This will give the Supplemental Trust a 50 percent interest in NIC on a fully diluted basis. For a limited period of time (the Lock-up Period), the NIC Class B Common generally will be restricted and will have no voting or transfer rights.[10] The NIC Class B Common stock certificates will bear a legend indicating that the stock has not been registered under the Securities Act of 1933 and may not be sold or transferred.[11]

Upon the earlier of five years following implementation of the New Plan, or three years following the date upon which Navistar has pre-funded the Base Trust (on an aggregate basis) for $500 million, the NIC Class B Common will automatically convert into shares of NIC Common Stock, with full voting rights and traded on the New York Stock Exchange. Following conversion, the Supplemental Program Committee may transfer and dispose of the shares of NIC Common Stock as they deem prudent.

In addition to the initial contribution of NIC Class B Common, Navistar also will be obligated to make annual cash contributions to the Supplemental Trust based upon net profits above a certain threshold (Profit Sharing Contributions). The threshold level, and the limits on the amount of the contribution if profits exceed that level, will be calculated pursuant to a specific formula described in the Supplemental Program. The formula employs a progressive rate structure to determine the particular percentage of the excess that must be contributed to the Supplemental Program Trust, with the highest rate capped at 16 percent above Navistar's net profits above the threshold amount.

Because of the restrictive nature of the NIC Class B Common, it cannot be used to offset retiree premium obligations, or other benefit payment obligations which retirees will be required to make under the New Plan. Therefore, during the Lock-up Period and prior to the effective registration of the Supplemental Trust's converted NIC Common Stock, the Supplemental Program Committee (described further in paragraph 20) will be authorized to make advanced funding requests to Navistar for up to $10 million annually. The Supplemental Program Committee will direct Navistar as to how the advanced funds may be used and will require Navistar to satisfy the cash contribution requirement in one of two ways. Navistar will either be directed to (1) purchase from the Supplemental Trust an equivalent amount of NIC Class B Common or (2) credit the cash contribution against current or future Profit Sharing Contributions. If NIC Class B Common Stock is purchased by Navistar from the Supplemental Trust, the purchase price of the NIC Class B Common will be equal to the average New York Stock Exchange closing price, per share, of NIC Common Stock on each of the 30 trading days prior to the date that the cash contribution is due, but in no event will such price be less than adequate consideration as defined in section 3(18) of the Act at the time of the sale.

Upon implementation of the New Plan, Navistar will also contribute to the Supplemental Trust the sole outstanding share of Series A Preference Stock. The Series A Preference Stock will entitle the Supplemental Trust to elect two members of the NIC Board of Directors (if the Trust's ownership interest in NIC is at least 20 percent, taking into account both NIC Common Stock and NIC Class B Common) or one Board member (if such ownership interest is between 10 and 20 percent). The Series A Stock will carry no other rights.

20. The right to manage the assets of the Supplemental Trust, will rest with a committee composed of five individuals, the Supplemental Program Committee.[12] All actions and decisions concerning the management of the assets of the Supplemental Trust will be subject to agreement by a majority of the

[8] Such pre-funding will occur within six months of plan implementation unless the NIC Board of Directors reasonably concludes that complying with such time limit would cause either NIC or Navistar to be unable to pay its obligations arising in the ordinary course of business when due.

[9] All pre-funded amounts will be invested on a diversified basis (excluding any investment in Navistar securities and real estate of any kind) and will be used to secure Navistar's Base Program obligations.

[10] There are several exceptions to the restrictions against transfer or voting. The Supplemental Trust may vote on any amendment to NIC's certificate of incorporation or any other action that would have the effect of eliminating or amending the rights of NIC Class B stockholders. The Trust also will have the right, as a NIC Class B stockholder, to vote on any transaction that under the terms of NIC's certificate of incorporation requires the vote of 85 percent of all shares of any class of NIC common stock, such as a merger, consolidation, or sale of substantially all NIC assets. The NIC Class B Common may be transferred pursuant to a transaction approved by the NIC Board of Directors, or without NIC Board of Director approval may be transferred pursuant to a tender or exchange offer, or pledged to a financial institution as security for an obligation of the Supplemental Trust.

[11] The applicants represent that the Lock-up Period is absolutely necessary to enable Navistar to satisfy its Base Trust pre-funding commitment through stock equity offerings. Without such restrictions, potential investors would fear that the Supplemental Trust's shares might be sold in massive blocks shortly thereafter, thereby causing Navistar's stock price to be discounted below the price they have just paid. The applicants state that the alternative, that the Trust's shares might be dribbled out to the market in small increments over a longer period of time, thereby creating a low ceiling on the stock's appreciation over the price paid by new investors, would also frighten the equity market.

[12] During the Lock-up Period, Navistar will compensate all Supplemental Program Committee members not employed by the UAW, as well as all Supplemental Committee Appointment Group members, for time spent on Committee matters, and reimburse the Committee for reasonable out-of-pocket expenses, including the expenses of outside professional advisors. These obligations are capped at $100,000 annually.

Committee members. The Supplemental Program Committee's management responsibilities include the right to direct the vote of NIC Common Stock and to dispose of or transfer those shares. The Supplemental Program Committee will also, in conjunction with its advisors, determine the amount of Supplemental Trust assets to be transferred to the Base Trust, and what percentage of such transferred assets should be used to reduce premiums, copayments or deductibles, Medicare premium payments or be used to provide additional benefits. In addition, the Supplemental Program Committee will be solely responsible for the making of advance funding requests to Navistar during the Lock-up Period, and for determining the manner in which that contribution requirement will be satisfied. Also, the Supplemental Program Committee is expressly authorized to engage consultants, investment advisors, actuaries and other professionals to assist it in managing the assets of the Trust. This authorization includes the appointment of an independent investment banker or corporate valuator to value the NIC Class B Common Stock.

Two of the members of the Supplemental Program Committee will be appointed by the UAW. The remaining three non-UAW members will be independent of Navistar, the UAW and each of their affiliates.[13] Specifically, the applicants represent that none of the three non-UAW Committee members, will be current employees of the UAW or retirees who were represented by the UAW at the time of their retirement. In addition, the applicants represent that none of the non-UAW members: (1) Will have any ownership interest in Navistar or NIC[14]; (2) are officers, directors or 5 percent or more shareholders or partners of any person(s) in which NIC has any ownership interest; and (3) will receive more than 5 percent of their annual gross income (excluding retirement income) for any taxable year in the aggregate from Navistar, UAW, or any affiliates thereof.

21. In order to ensure the Supplemental Program Committee's flexibility in liquidating sizeable blocks of NIC Common Stock after the Lock-up Period, the Supplemental Program restricts Navistar or NIC in the absence of approval from the Supplemental Program Committee, from transferring or disposing of stock if to do so would limit the amount of securities the Supplemental Trust can thereafter sell to an amount less than $500 million, minus all previous liquidations by that Trust (except that Navistar and NIC are free to transfer or dispose of up to $100 million of stock if required for working capital).

22. During the period beginning with the expiration of the Lock-up Period and concluding at the earlier of either (1) a period of equal duration or (2) when the Supplemental Trust has sold $500 million of NIC Common Stock (known as the "Window Period"), neither Navistar nor NIC has the ability to register or sell any NIC equity without the prior consent of the Supplemental Program Committee. There are exceptions to this Window Period prohibition, such as equity sales necessary to effect acquisitions or spin-offs of subsidiaries. The Window Period is intended to enable the Supplemental Program Committee to liquidate a large block of NIC Common Stock upon the conclusion of the Lock-up Period without interference from NIC or Navistar. Furthermore, if after the Window Period any NIC Common Stock remains in the Supplemental Trust, the Supplemental Trust will be entitled to participate in public offerings by Navistar or NIC up to 50 percent of the shares sold (this equal participation right is known as a "Piggy-Back Right"). This Piggy-Back Right will terminate when the Supplemental Trust is free to sell its shares of NIC Common Stock to the public without quantity limitations under applicable securities laws (estimated to be when the Supplemental Trust holds 5 percent or less of the outstanding NIC Common Stock).

23. In summary, the applicants state that the proposed transaction satisfies the statutory criteria of section 408(a) because (a) the District Court for the Southern District of Ohio determined in a written opinion after a full hearing that the terms of the New Plan are fair, reasonable and adequate for New Plan participants; (b) the ongoing operation of the New Plan will be subject to the continuing jurisdiction and guidance of the District Court for the Southern District of Ohio; (c) the implementation of the New Plan, as proposed, provides the only realistic solution to enable Navistar to return to economic health so that it can continue to provide meaningful health benefits to the 63,000 Navistar retirees, surviving spouses and their dependents; (d) the terms of the New Plan which require pre-funding of benefits provide for greater protection of the retirees' benefits than required by the Act; and (e) the assets of the Supplemental Trust will be managed by a five-member Supplemental Program Committee, the majority of whom will be independent of Navistar and the UAW and their affiliates.

The proposed exemption, if granted, will be subject to the express conditions that the material facts and representations contained in the application are true and complete, and that the application accurately describes all material terms of the transaction to be consummated pursuant to the proposed exemption.

Notice to Interested Persons

Those persons who may be interested in the pendency of the requested exemption include all *Shy* class representatives, all current retirees of Navistar, their surviving spouses or dependents, as well as all current employees of Navistar, whether represented or non-represented (collectively, Interested Persons).

The Applicants represent that notice will be provided to the Interested Persons by mail, posting, and publication in daily newspapers. Navistar will mail a copy of the Notice, by first-class mail, to each Interested Person at his or her last known mailing address. The Notice will contain a photocopy of the formal Notice of Proposed Exemption published in the **Federal Register**, and will inform such Interested Persons of their right within a time specified in the Notice to comment or request a hearing.

In light of the experience provided by the recently undertaken *Shy* class action mailing, the Applicants believe that Navistar will be prepared to provide the Notice to Interested Persons within three business days after publication in the **Federal Register** of the Notice of Proposed Exemption.

General Information

The attention of interested persons is directed to the following:

(1) The fact that a transaction is the subject of an exemption under section 408(a) of the Act does not relieve a fiduciary or other party in interest from certain other provisions of the Act, including any prohibited transaction provisions to which the exemption does not apply and the general fiduciary

[13] After the initial appointment of the Supplemental Program Committee, which was approved by the *Shy* Court, Committee members will be appointed and replaced by a special committee according to procedures specified in the Supplemental Program. The applicants represent that subsequent appointments will also be brought to the Court for its approval.

[14] In addition, the non-UAW members will not acquire any property from, sell any property to or borrow any funds from NIC, UAW, or any affiliate thereof, during the period that such individual severs as a member of the Supplemental Program Committee and continuing for a period of 6 months after such individual ceases to be a member of the Committee or negotiated any such transaction during the period that such individual serves as a member of such Committee.

responsibility provisions of section 404 of the Act, which among other things require a fiduciary to discharge his duties respecting the plan solely in the interest of the participants and beneficiaries of the plan and in a prudent fashion in accordance with section 404(a)(1)(B) of the Act.

(2) The proposed exemption, if granted, will not extend to transactions prohibited under section 406(b)(3) of the Act.

(3) Before an exemption may be granted under section 408(a) of the Act, the Department must find that the exemption is administratively feasible, in the interest of the plan and of its participants and beneficiaries and protective of the rights of participants and beneficiaries of the plan; and

(4) The proposed exemption, if granted, will be supplemental to, and not in derogation of, any other provisions of the Act, including statutory or administrative exemptions. Furthermore, the fact that transaction is subject to an administrative or statutory exemption is not dispositive of whether the transaction is in fact a prohibited transaction.

Written Comments and Hearing Requests

All interested persons are invited to submit written comments or requests for a hearing on the pending exemption to the address above, within the time period set forth above.

All comments will be made a party of the record. Comments received will be available for public inspection with the application for exemption at the address set forth above.

Signed at Washington, DC, this 28th day of June,

Ivan L. Strasfeld,

Director of Exemption Determinations, Pension and Welfare Benefits Administration, U.S. Department of Labor.

[FR Doc. 93–15606 Filed 6–30–93; 8:45 am]

BILLING CODE 4510–29–P

NATIONAL COMMISSION ON MANUFACTURED HOUSING

Meeting

AGENCY: National Commission on Manufactured Housing.

ACTION: Notice of Meeting.

SUMMARY: In announces with the Federal Advisory Committee Act, Public Law 101–625, as amended, the National Commission on Manufactured Housing announces a forthcoming meeting of the Commission.

DATES:

July 14, 1993, 8:30 a.m.—5 p.m., Public Hearing

July 15, 1993, 8:30 a.m.—5 p.m., Full Commission Meeting

July 16, 1993, 8:30 a.m.—3 p.m., Full Commission Meeting

ADDRESSES: Holiday Inn (Old Town Alexandria) 480 King Street Old Town Alexandria, VA 22314

FOR FURTHER INFORMATION CONTACT: Carmelita Pratt, Administrative Officer, The National Commission on Manufactured Housing, 301 N. Fairfax Street, suite 110, Alexandria, VA 22314 (703) 603–0440.

TYPE OF MEETING: Open.

Carmelita R. Pratt,

Administrative Officer.

[FR Doc. 93–15559 Filed 6–30–93; 8:45 am]

BILLING CODE 6820–EA–M

NATIONAL SCIENCE FOUNDATION

Permit Application Received Under the Antarctic Conservation Act of 1978

June 25, 1993.

AGENCY: National Science Foundation.

ACTION: Notice of permit application received under the Antarctic Conservation Act of 1978, Public Law 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish notice of permit applications received to conduct activities regulated under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act of 1978 at title 45 part 670 of the Code of Federal Regulations. This is the required notice of permit application received.

DATES: Interested parties are invited to submit written data, comments, or views with respect to this permit application by July 25, 1993. Permit applications may be inspected by interested parties at the Permit Office, address below.

ADDRESSES: Comments should be addressed to Permit Office, Room 627, Office of Polar Programs, National Science Foundation, Washington, DC 20550.

FOR FURTHER INFORMATION CONTACT: Thomas F. Forhan at the above address or (202) 357–7817.

SUPPLEMENTARY INFORMATION: The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Pub. L. 95–541), has developed regulations that implement the "Agreed Measures for the Conservation of Antarctic Fauna and Flora" for all United States citizens. The Agreed Measures, developed by the Antarctic Treaty Consultative Parties, recommended establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas as requiring special protection. The regulations establish such a permit system to designate Specifically Protected Areas and Sites of Special Scientific Interest.

The application received is as follows:

1. Applicant

Dr. William R. Fraser, MSU Central States Office, 830 Hunt Farm Rd., Long Lake, MN 55356.

Activity for Which Permit Requested

Enter Specially Protected Area.

The applicant is a participant in the long term ecological research (LTER) program on the Antarctic peninsula during the August and September period of 1993, and will be in the vicinity of Dion Island, where bird populations have not been censused in approximately 20 years. The applicant is therefore seeking permission to land on Dion Island as opportunity arises to census the adult and chick population. No other work will be conducted on the island other than that described herein. The data obtained will be used to update the status of this population for the Antarctic Peninsula area.

Location

Dion Islands, Antarctic Peninsula, Access via Zodiac
From RV Polar Duke.

Dates

08/01/93–10/01/93

2. Dr. William R. Fraser, MSU Central States Office, 830 Hunt Farm Road, Long Lake, MN 55356.

Activity for Which Permit Requested

Taking. Importation into USA.

The applicant, as a participant in this long-term ecological research (LTER) program on the Antarctic Peninsula, is studying the relationships of variability in seabird reproductive success, survival and recruitment to fluctuations in certain biotic and abiotic features in their environment, especially the effects of sea ice on prey availability and/or abundance.

The specific action for which this permit is being sought is the taking limited numbers of penguins and flying birds for diet analysis. As has been true of the applicant's procedures in the past during other research projects, all penguins will be released unharmed after sampling, while flying birds will be imported to the U.S. and given to a

number of agencies (museums and laboratories) after we finish gut content analysis, measure body condition and assess reproductive status.

Location

LTER study site, including offshore areas near Palmer Station and the Bellingshausen Sea.

Dates

08/01/93–10/01/93.

3. Dr. William R. Fraser, MSU Central States Office, 830 Hunt Farm Road, Long Lake, Mn 55356.

Activity for Which Permit Requested

Enter Specially Protected Area.

The applicant is a participant in this type-term egological research (LTER) program on the Antarctic Peninsula, the applicant is studying the relationships between variability in seabird reproductive success, survival and recruitment to fluctuations in certain biotic and abiotic features in their environment, especially the effects of sea ice prey availability and/or abundance.

The applicant would like to visit Litchfield Island on foot 2 times per week (via Zodiac from Palmer Station) for 1–2 hours per visit to census penguins and other seabirds breeding on the island. The applicant's studies rely heavily on the ability to document weekly changes in penguin populations and breeding effort. The island has thus become a reliable source of long-term comparative data on penguin demography important to the hypotheses being tested by the LTER. As in past years, all visits will be restricted to the unvegetated parts of the island.

The applicant would like to visit Biscoe Point on foot (via Zodiac from Palmer Station) on 3 separate occasions to census penguins and other seabirds breeding on the island. Some of the penguins banded as chicks near Palmer Station are not returning to their natal colonies, but are instead moving to colonies on islands quite distant from Palmer. The applicant needs to document how pervasive trend is by finding previously banded birds so as to adequately incorporate them into our data on birds so as to adequately incorporate them into our data on survival and recruitment. Not doing so will potentially bias by underestimating annual survival and recruitment, which will then affect the interpretation and validity of demographic models being developed for the LTER.

Location

Litchfield Island, Arthur Harbor.

Dates

10/01/93–04/01/94.

4. Dr. William Fraser, MSU Central States Office, 830 Hunt Farm Road, Long Lake, Mn 55356.

Activity for Which Permit Requested

Taking.

The applicant and participants are in this long-term egological research (LTER) program on the Antarctic Peninsula, the applicant is interested in relating variability in seabird reproductive success, survival and recruitment to fluctuations in certain biotic and abiotic features in their environment, especially the effects of sea ice prey availability and/or abundance.

This will require taking by capture and release of penguins and flying seabirds for censusing, binding, stomach lavage, weighing, measuring, examining, and attaching and removing radio transmitters.

The location proposed is Palmer Station and other nearby islands and sites. A separate permit has been requested to enter specially protected areas in the vicinity. Not doing so will potentially bias by underestimating annual survival and recruitment, which will then affect the interpretation and validity of demographic models being developed for the LTER.

Location

Palmer Station and nearly islands.

Dates

10/01/93–04/01/94.

Thomas F. Forhan,

Permit Office, Office of Polar Programs.

[FR Doc. 93–15500 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Biological and Critical Systems; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting.

Name: Special Emphasis Panel in Biological and Critical Systems.

Date and Time: July 19–20, 1993; 8:30 a.m.–5 p.m.

Place: National Science Foundation Annex, 1110 Vermont Avenue, NW., room 500A, Washington, DC.

Type of Meeting: Closed.

Contact Person: Karen Mudry, National Science Foundation, Program Director, Bioengineering and Aiding the Disabled Program, 1800 G St. NW., room 1132, Washington, DC 20550. Telephone: (202) 357–7955.

Purpose of Meeting: To provide advice and recommendations concerning proposals submitted to NSF for financial support.

Agenda: To review and evaluate Biosystems Analysis and Control proposals as part of the selection process for awards.

Reason for Closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are exempt under 5 U.S.C. 552b(c), (4) and (6) of the Government in the Sunshine Act.

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15508 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Advisory Committee for Biological Sciences; Committee of Visitors; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting.

Name: Committee of Visitors Review of the Division of Molecular and Cellular Biosciences of the Biochemistry and Molecular Structure and Function Program.

Date and time: Monday, July 19, and Tuesday, July 20, 1993; 8:30 a.m. to 5 p.m.

Place: The National Science Foundation, room 1242, 1800 G Street, NW., Washington, DC 20550.

Type of meeting: Closed.

Contact Person: Maryanna Henkart, Acting Deputy Division Director for Molecular and Cellular Biosciences, National Science Foundation, 1800 G St. NW., Washington, DC 20550. Telephone: (202) 357–9400.

Purpose of meeting: To carry out Committee of Visitors (COV) review, including examination of decisions on proposals, reviewer comments, and other privileged materials.

Agenda: To provide oversight review of the Biochemistry and Molecular Structure and Function Program in the Division of Molecular & Cellular Biosciences.

Reason for closing: The meeting is closed to the public because the Committee is reviewing proposal actions that will include privileged intellectual property and personal information that could harm individuals if they were disclosed. If discussions were open to the public, these matters that are exempt under 5 U.S.C. 552b(c) (4) and (6) of the Government in the Sunshine Act would be improperly disclosed.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15509 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Electrical and Communications Systems; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

Name: Special Emphasis Panel in Electrical and Communications Systems.

Date and Time: July 21, 1993; 9 a.m. to 5 p.m.

Place: Room 1133, NSF, 1800 G Street, NW., Washington, DC 20550.

Type of Meeting: Closed.

Contact Person: Dr. Lawrence Goldberg, Program Director, Quantum Electronics, Waves and Beams, ECS Division, National Science Foundation, 1800 G Street, NW., room 1151, Washington, DC 20550, Telephone: (202) 357–9618.

Purpose of Meeting: To provide advice and recommendations concerning proposals submitted to NSF for financial support.

Agenda: To review and evaluate research proposals submitted to the Quantum Electronics, Waves and Beams Program.

Reason for Closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemptions 4 and 6 of 5 U.S.C. 552b(c) (4) and (6) the Government in the Sunshine Act.

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15510 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Elementary, Secondary, and Informal Education; Meeting

In accordance with the Federal Advisory Committee Act (Pub L. 92–463, as amended), the National Science Foundation announces the following meeting.

Name: Special Emphasis Panel in Young Scholars.

Date and Time: July 21, from 5 p.m. to 8 p.m. and July 22 and 23, from 8 a.m. to 5 p.m.

Place: St. James Hotel, 990 24th Street, N.W., Washington, DC 20037.

Type of Meeting: Closed.

Contact of Person: Dr. Julia V. Clark, Program Director, Young Scholars Program, 1800 G Street, N.W., Washington, DC 20550 Telephone: (202) 357–7538.

Purpose of Meeting: To provide advice and recommendations concerning proposals submitted to NSF for financial support.

Agenda: To review and evaluate Young Scholars proposals as part of selection process for awards.

Reason for Closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are exempt under 5 U.S.C. 552b(c) (4) and (6) of the Government in the Sunshine Act

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

FR Doc. 93–15511 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Elementary, Secondary, and Informal Education; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting.

Name: Special Emphasis Panel in Instructional Materials Development.

Dates and Times: July 30, 1993 from 8:30 a.m. to 5:30 p.m. and July 31, 1993 from 8:30 a.m. to 3:30 p.m.

Place: Grand Hotel, 2350 M Street, NW., Washington, DC 20037.

Type of Meeting: Closed.

Contract of Person: Ms. Alice B. Moses, Program Director, Instructional Materials Development Program, 1800 G Street, NW., room 635A, Washington, DC 20550 Telephone: (202) 257–7538.

Purpose of Meeting: To provide advice and recommendations concerning proposals submitted to NSF for financial support.

Agenda: To review and evaluate Instructional Materials Development proposals as part of the selection process for awards.

Reason for Closing: The proposals being reviewed include information of a proprietary of confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are exempt under 5 U.S.C. 552b(c) (4) and (6) of the Government in the Sunshine Act.

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15512 Filed 6–30–93; 8:45am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Networking and Communications Research and Infrastructure; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

Name: Special Emphasis Panel in Networking and Communications Research.

Date and time: July 20–21, 1993; 8:30 a.m. to 5 p.m.

Place: Room 500–B, National Science Foundation, 1110 Vermont Avenue, Washington, DC 20550.

Type of meeting: Closed.

Contact Person: Dr. Darleen Fisher, Networking and Communications Research Program, National Science Foundation, room 416, Washington, DC 20550 (202 357–9717).

Purpose of meeting: To provide advice and recommendations concerning proposals submitted to NSF for financial support.

Agenda: To review and evaluate proposals submitted to the All-Optical Network and Communication, NSF 93–60.

Reason for closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries, and personal information concerning individuals associated with the proposals.

These matters are exempt under 5 U.S.C. 552b.(c) (4) and (6) of the Government in the Sunshine Act.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15513 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Polar Programs; Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting.

Name: Special Emphasis Panel in Polar Programs.

Date and time: July 23, 1993.

Place: Rm 609, National Science Foundation, 1800 G St., NW., Washington, DC.

Type of Meeting: Closed.

Contact Person: Guy G. Guthridge, Manager, Polar Information Program, National Science Foundation, 1800 G St. NW., Washington, DC 20550. Telephone: (202) 357–9422.

Purpose of Meeting: To manage requests from scholars in the humanities for access to Antarctica, NSF administers the Antarctic Artists and Writers Program. The panel will provide advice and recommendations concerning proposals submitted to NSF for access to Antarctica.

Agenda: To review and evaluate Antarctic Artists and Writers proposals as part of the selection process for awards.

Reason for Closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are exempt under 5 U.S.C. 552b(c), (4) and (6) of the Government in the Sunshine Act.

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15514 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

Special Emphasis Panel in Science and Technology Infrastructure; Meetings

In accordance with the Federal Advisory Committee Act. (Pub. L. 92–463, as amended), the National Science Foundation announces the following meetings.

Name: Site Visits for Substantive Review of Twelve Science & Technology Centers.

Date	Place	Time
7/21–22/93	Kent State Univesity, Kent, OH	8:30–5:00.
8/5–6/93	University of Virginia, Charlottesville, VA	8:30–5:00.
8/9–10/93	University of Pennsylvania, Philadelphia, PA	8:30–5:00.
8/9–10/93	University of Michigan, Ann Arbor, MI	8:30–5:00.
8/12–13/93	University of Texas, Austin, TX	8:30–5:00.
8/17–18/93	State University of New York, Stony Brook, NY	8:30–5:00.
8/26–27/93	University of Minnesota, Minneapolis, MN	8:30–5:00.
8/30–31/93	Carnegie Mellon University, Pittsburgh, PA	8:30–5:00.
9/1–2/93	University of California, Davis, CA	8:30–5:00.
9/1–2/93	University of Chicago, Chicago, IL	8:30–5:00.
9/2–3/93	University of Southern California, Los Angeles, CA	8:30–5:00.
9/13–14/93	University of Utah, Salt Lake City, UT	8:30–5:00.

Type of Meetings:

Contact: Dr. Sonja Sperlich, Associate Director, Science and Technology Centers, National Science Foundation, 1800 G Street, NW., room 533, Washington, DC 20550, 202–357–9808.

Purpose of Meetings: To determine future funding for the Centers.

Agenda: Review and evaluation of the Science and Technology Centers.

Reason for Closing: The awards being reviewed include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemptions (4) and (6) of 5 U.S.C. 552b(c), Government in the Sunshine Act.

Dated: June 28, 1993.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 93–15515 Filed 6–30–93; 8:45 am]

BILLING CODE 7555–01–M

NUCLEAR REGULATORY COMMISSION

Illinois Power Co., et al., Clinton Power Station, Unit 1; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. NPF–62, issued to the Illinois Power Company, and the Soyland Power Cooperative, Inc. (the licensee), for operation of the Clinton Power Station (CPS), Unit 1, located in Dewitt County, Illinois.

Environmental Assessment

Identification of Proposed Action

The proposed changes would simplify the CHANNEL FUNCTIONAL TEST requirements for the Low and High Power Setpoint (turbine first-stage pressure channels) associated with the Rod Pattern Control System (RPCS) in Table 4.3.6–1 of the CPS Technical Specifications (TS) and are consistent with the staff's Improved Standard Technical Specifications for BWR/6 facilities.

Specifically, the proposed changes are:

(1) Note (b) is associated with startup testing requirements and currently states that the channel functional tests shall be performed "Within 24 hours prior to startup, if not performed within the previous 7 days." Note (b) is being clarified to read, "Within 7 days prior to startup."

(2) The daily channel functional test requirements and its associated Note (c) are being eliminated. The rod pattern controller would be adequately tested in accordance with CPS Technical Specification 4.1.4.2.

(3) Note (d) is associated with monthly testing requirements and currently states, "At least once per 31 days while operation continues within a given power range above the RPCS low power setpoint." Note (d) is being eliminated to simplify monthly testing requirements.

(4) Note (e) is associated with both monthly and startup testing requirements and currently states, "Includes reactor manual control multiplexing system input." Note (e) is being eliminated because it is a carry-over from earlier versions of the BWR standard technical specifications and it will simplify monthly and startup testing. The RPCS for CPS automatically performs testing that satisfies the intent of note (e).

The proposed action is in accordance with the licensee's application for amendment dated October 30, 1987.

The Need for the Proposed Action

The proposed action is needed in order to clarify the existing TS and to make the CPS Technical Specifications consistent with the staff's Improved Standard TS for BWR/6 facilities.

Environmental Impacts of the Proposed Action

The proposed revision changes the surveillance requirements of the CHANNEL FUNCTIONAL TESTS and will not increase the types or amounts of effluents that may be released offsite, nor increase individual or cumulative occupational radiation exposures. Therefore, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed amendment.

With regard to potential nonradiological impacts, the proposed changes do not affect nonradiological effluents and have no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed amendment.

The Commission has previously had published in the **Federal Register** a Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Prior Hearing (53 FR 4477). The Commission did not receive any requests for a hearing.

Alternative to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action. Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in connection with the Nuclear Regulatory Commission's Final Environmental Statement, dated May 1982, related to the operation of the Clinton Power Station, Unit 1.

Agencies and Persons Consulted

The staff consulted with the State of Illinois regarding the environmental impact of the proposed action.

Finding of No Significant Impact

The Commission has determined not to prepare an environmental impact statement for the proposed changes to the CPS TS. Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the application for amendment dated October 30, 1987, which is available for public inspection at the Commission's Public Document room, 2120 L Street, NW., Washington, DC and at the Vespasian Warner Public Library, 120 West Johnson Street, Clinton, Illinois 61727.

Dated at Rockville, Maryland, this 23rd day of June 1993.

For the Nuclear Regulatory Commission.

Byron L. Siegel,

Acting Director, Project Directorate III-2, Division of Reactor Projects III/IV/V, Office of Nuclear Reactor Regulation.

[FR Doc. 93-15565 Filed 6-30-93; 8:45 am]

BILLING CODE 7590-01-M

Generic Letter 89-10, Supplement 5, "Inaccuracy of Motor-Operated Valve Diagnostic Equipment," Issued

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of issuance.

SUMMARY: The Nuclear Regulatory Commission (NRC) has issued Generic Letter 89-10, Supplement 5, "Inaccuracy of Motor-Operated Valve Diagnostic Equipment." This generic letter supplement is available in the Public Document Rooms under accession number 930623009. The resolution of public comments received on this generic letter supplement is discussed in two memoranda to the Chairman of the Committee to Review Generic Requirements which are also available in the Public Document Rooms under accession numbers 9211060041 and 9302220364. This generic letter supplement is also discussed in Commission information paper SECY-93-168 which is also available in the Public Document Rooms under accession number 9306210065.

DATES: The generic letter supplement was issued on June 28, 1993.

ADDRESSES: Not applicable.

FOR FURTHER INFORMATION CONTACT: Thomas G. Scarbrough at (301) 504-2794.

SUPPLEMENTARY INFORMATION: None.

Dated at Rockville, Maryland, this 25th day of June 1993.

For the Nuclear Regulatory Commission.

Gail H. Marcus,

Chief, Generic Communications Branch, Division of Operating Reactor Support, Office of Nuclear Reactor Regulation.

[FR Doc. 93-15567 Filed 6-30-93; 8:45 am]

BILLING CODE 7590-01-M

[Docket Nos. 50-445 and 50-446]

Texas Utilities Electric Co., Comanche Peak Steam Electric Station, Units 1 and 2; Issuance of Director's Decision Under 10 CFR 2.206

Notice is hereby given that the Director, Office of Nuclear Reactor Regulation (NRR), has issued a "Director's Decision Pursuant to 10 CFR § 2.206" (Director's Decision) concerning a Petition filed with the U.S. Nuclear Regulatory Commission (NRC) by Messrs. Macktal and Hasan (Petitioners) on June 11, 1992. The Petition presented concerns regarding the Comanche Peak Steam Electric Station, Units 1 and 2 (CPSES) of the Texas Utilities Electric Company (TU Electric or Licensee). Petitioners submitted additional documents, which are considered supplements to the Petition, on October 6 and November 19, 1992.

The Petition alleged the discovery of new evidence of a continuing practice by the Licensee to pay "hush money" to keep significant information about CPSES from Petitioners and the NRC. Specifically, the Petition referred to a January 30, 1990, settlement agreement between the Licensee and the Tex-La Electric Cooperative of Texas, Inc. (Tex-La), a former co-owner of CPSES, that allegedly contains restrictive language in violation of section 211 of the Energy Reorganization Act (ERA) and 10 CFR 50.7. Petitioners further alleged that the settlement agreements have resulted in the suppression of information associated with the safe operation of CPSES and that the TU Electric response of October 16, 1992, to the Petition contained incorrect and misleading information to the point of being materially false.

On the basis of this information, Petitioners asked the NRC to suspend the TU Electric license to operate CPSES Unit 1 and its permit to construct CPSES Unit 2, and not to extend the expiration date of the permit to construct CPSES Unit 2. Petitioners also asked the NRC to take immediate actions, specifically that: (1) A licensing board be established to allow public scrutiny into TU Electric's alleged practice of paying "hush money"; (2) the NRC notify TU Electric and former co-owners that no settlement agreement can preclude employees, attorneys, agents, consultants, or others from providing information to persons involved in proceedings before the NRC; (3) copies of the TU Electric-former co-owner settlement agreements be made public and provided to Petitioners' counsel; and (4) the NRC notify the counsel to Tex-La that he and others are free to disclose safety-related information about CPSES to others.

In an acknowledgement letter of August 26, 1992, the Director of NRR informed Petitioners that the Petition was being considered pursuant to 10 CFR 2.206. The Director declined at that time to take any of the immediate actions requested in the Petition and stated that the NRC would take appropriate action on the specific issues raised in the Petition within a reasonable time.

The Petition has been considered under the provisions of 10 CFR 2.206. Notice of receipt of the Petition was published in the **Federal Register** on September 2, 1992 (57 FR 40231).

As stated in the Director's Decision, the Director has granted in part and denied in part Petitioners' requests. Petitioners sought that the NRC notify TU Electric and the former co-owners that no settlement agreement can preclude individuals and organizations from bringing safety information to the NRC. This was done. Petitioners also sought that copies of the settlement agreements be made public. This was done. Finally, Petitioners requested that the counsel for Tex-La be notified that he is free to disclose safety information to the NRC. The NRC has caused this to happen. The other relief sought by Petitioners has been denied.

The Director's Decision is available for inspection and copying in the Commission's Public Document Room, 2120 L Street, NW., Washington, DC 20555 and at the local public document room for the Comanche Peak Steam Electric Station, at the University of Texas at Arlington Library, Government Publications/Maps, 701 South Cooper, P.O. Box 19497, Arlington, Texas 76019. A copy of the Director's Decision will be filed with the Secretary of the Commission for review by the Commission in accordance with 10 CFR 2.206(c). The Director's Decision will constitute the final action of the Commission 25 days after the date of issuance unless the Commission, on its own motion, institutes a review of the Decision within that time.

Dated at Rockville, Maryland this 4th day of June 1993.

For the Nuclear Regulatory Commission.

Thomas E. Murley,

Director, Office of Nuclear Reactor Regulation.

[FR Doc. 93–15568 Filed 6–30–93; 8:45 am]

BILLING CODE 7590–01–M

[Docket No. 50–298]

Exemption

In the Matter of Nebraska Public Power District (Cooper Nuclear Station)

I

Nebraska Public Power District (the licensee) is the holder of Operating License No. DPR–46, which authorizes operation of Cooper Nuclear Station (CNS). The operating license provides, among other things, that CNS is subject to all rules, regulations, and orders of the Commission now or hereafter in effect.

The facility consists of a boiling water reactor at the licensee's site in Nemaha County, Nebraska.

II

One of the conditions of all operating licenses for water-cooled power reactors, as specified in 10 CFR 50.54(o), is that the primary containment shall meet the leakage-test requirements set forth in 10 CFR part 50, appendix J, paragraph III.C.1: "Type C tests shall be performed by local pressurization. The pressure shall be applied in the same direction as that when the valve would be required to perform its safety function, unless it can be determined that the results from the tests for a pressure applied in a different direction will provide equivalent or more conservative results."

By letter dated June 7, 1993, the licensee requested a one-time schedular exemption from appendix J to 10 CFR part 50 to allow Type C (local leak-rate) testing of 10 containment isolation valves in the reverse direction. As stated above, paragraph III.C.1 of appendix J requires that for Type C testing the test pressure must generally be applied to the valve from the same side as that when the valve would be required to perform its safety function (i.e., the inside-containment side, also called the accident direction or the forward direction). However, the regulation allows an exception if it can be determined that testing with the pressure applied in the reverse direction provides equivalent or more conservative results. In its letter dated June 7, 1993, the licensee stated that 10 containment isolation valves cannot now be shown to satisfy the equivalent-or-more-conservative requirement that permits reverse-direction testing. The licensee is taking steps to comply with appendix J either by showing that the 10 valves meet the equivalent-or-more-conservative requirement or by modifying the plant to enable future Type C tests to be conducted by pressurization in the forward direction. To allow time for completion of these activities, the licensee has requested that these 10 valves be exempted from the forward-testing requirement until the next refueling outage, currently scheduled to begin in the fall of 1994. The licensee will then test them in the forward direction if it cannot show that reverse-direction testing is equivalent or more conservative.

III

The subject valves are PC–MOV–305MV, PC–MOV–1304MV, PC–MOV–1306MV, RCIC–MOV–M015, RHR–MOV–M016A, RHR–MOV–M016B, RHR–MOV–M021A, RHR–MOV–M021B, RHR–MOV–M031A, and RHR–MOV–M031B. The licensee has committed to comply with appendix J by making the plant modifications necessary to test these valves in the forward direction if the licensee cannot demonstrate that testing in the reverse direction is equivalent to or more conservative than testing in the forward direction. However, because there is insufficient time available to design, procure, and install these modifications prior to completion of the current refueling outage (currently scheduled to end in June 1993), the plant modifications will be made at the next refueling outage. Since the subject valves were tested in the reverse direction during the current outage, the exemption will allow testing in the forward direction to be deferred until the next refueling outage. The NRC staff has performed an evaluation of the exemption request and has determined that the licensee has provided adequate justification of the requested exemption.

IV

According to 10 CFR 50.12(a)(2), the Commission will not consider granting the exemption unless special circumstances are present. Pursuant to 10 CFR 50.12(a)(2)(v), special circumstances are present whenever the exemption would provide only temporary relief from the applicable regulation and the licensee has made good faith efforts to comply with the regulation. The exemption would provide only temporary relief by permitting the licensee to delay compliance with the leakage test requirements set forth in 10 CFR part 50, appendix J, paragraph III.C.1, until the next refueling outage, currently scheduled to begin in the fall of 1994. The NRC staff believes that the licensee has taken prudent steps to improve the containment integrity and that, if compliance did not require extending the refueling outage, the licensee would comply with appendix J. The licensee has only recently found that its earlier determination, that reverse direction testing is equivalent or conservative, may not be correct. The licensee has not had enough time to make the modifications necessary to allow forward-direction testing without extending the current refueling outage.

Based on our evaluation, the NRC staff has concluded that the licensee has made a good-faith effort to comply with the requirements of appendix J and that special circumstances as described in 10 CFR 50.12(a)(2)(v) exist.

Therefore, the Commission has determined that the requested schedular exemption from the appendix J forward-direction testing requirements for the subject valves should be granted.

V

Accordingly, the Commission has determined, pursuant to 10 CFR 50.12(a), that this exemption is authorized by law and will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Therefore, the Commission hereby approves the following exemption request.

A schedular exemption is granted from the requirements of Paragraph III.C.1 that a local leak-rate test be conducted in the forward direction for containment isolation valves PC–MOV–305MV, PC–MOV–1304MV, PC–MOV–1306MV, RCIC–MOV–M015, RHR–MOV–M016A, RHR–MOV–M016B, RHR–MOV–M021A, RHR–MOV–M001B, RHR–

MOV-M031A, and RHR-MOV-M031B. For good cause shown, this exemption will allow testing of the subject valves in the forward direction to be deferred until the end of the next refueling outage.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact of the quality of the human environment (58 FR 33286).

This exemption becomes effective upon issuance.

Dated at Rockville, Maryland this 23rd day of June 1993.

For the Nuclear Regulatory Commission.

Jack W. Roe,

Director, Division of Reactor Projects—III/IV/V, Office of Nuclear Reactor Regulation.

[FR Doc. 93-15566 Filed 6-30-93; 8:45 am]

BILLING CODE 7590-01-M

OFFICE OF PERSONNEL MANAGEMENT

Information Collection For Expedited OMB Review

AGENCY: Office of Personnel Management.

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1980 (Title 44 U.S.C. chapter 35), this notice announces collection of information from the public that has been submitted to OMB for expedited clearance. It will be a blanket clearance to cover information collected from applicants, deans, and references in the selection of Presidential Management Interns to comply with Executive Order 12364 signed by President Reagan on May 24, 1982. We estimate 3300 respondents will expend 2216 burden hours annually to file these forms. Copies of the proposed forms are appended to this notice.

DATES: Comments on this proposal should be received within 7 calendar days from the date of this publication. OMB has been requested to take action within 10 days from the date of this publication.

ADDRESSES: Send or deliver comments to:

C. Ronald Trueworthy, Agency Clearance Officer, U.S. Office of Personnel Management, 1900 E Street, NW—CHP-500, Washington, DC 20415.

or

Joseph Lackey, OPM Desk Officer, Office of Information and Regulatory Affairs, Office of Management and Budget, room 3002, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT:

U.S. Office of Personnel Management.

Patricia W. Lattimore,

Acting Deputy Director.

BILLING CODE 6325-01-M

APPLICATION FORM **The Presidential Management Intern Program**

Form Approved:
OMB No. 3206-0082

Important Note: Complete this form only after reading instructions on previous page.

A. PERSONAL INFORMATION

1. Last Name
2. First Name
3. M.I.
4. Title
5. Social Security Number
6. Legal Residence
7. Geographic Availability
8. Are you a U.S. Citizen? (Check one) YES NO
9. Veterans' Preference
10. Birthday (MM, DD, YY)
11. Completion Date of Current Degree (MM,YY)
12a. Present Telephone–*Include Area Code*
12b. Overseas Country City
13. Permanent Telephone–*Include Area Code*
14. Mailing Address (*Items 14-18)–Street Number and Name, Apartment Number*
15. City
16. State
17. ZIP Code
18. Foreign Country
18a. Overseas Postal Code
19. Permanent Address (*Items 19-22)–Street Number and Name, Apartment Number*
20. City
21. State
22. ZIP Code
23. University
School
Department
City
State or Country
University Department
24. Graduate Degree
25. Other Grad. Degree
26. Undergrad. Degree

27a. If you will require special physical arrangements or assistance at the regional screening panel, please check this box. You will be contacted and preparations will be made in advance. ☐

27. Desired Regional Screening Panel Location (See Instructions, Please check only one regional location.)

Atlanta Region
- ☐ Atlanta, GA
- ☐ Jackson, MS
- ☐ Miami, FL
- ☐ Orlando, FL
- ☐ Raleigh, NC

San Francisco Region
- ☐ Los Angeles, CA
- ☐ San Francisco, CA
- ☐ Seattle, WA

Philadelphia Region
- ☐ Boston, MA
- ☐ New York, NY
- ☐ Philadelphia, PA
- ☐ Pittsburgh, PA
- ☐ San Juan, PR
- ☐ Syracuse, NY

Chicago Region
- ☐ Chicago, IL
- ☐ Dayton, OH
- ☐ Detroit, MI
- ☐ Indianapolis, IN
- ☐ Kansas City, MO
- ☐ St. Louis, MO
- ☐ Twin Cities, MN
- ☐ Wichita, KS

Dallas Region
- ☐ Albuquerque, NM
- ☐ Dallas, TX
- ☐ Denver, CO
- ☐ Houston, TX
- ☐ New Orleans, LA
- ☐ Oklahoma City, OK
- ☐ Phoenix, AZ
- ☐ San Antonio, TX

Washington, DC
- ☐ Washington, DC

Europe
- ☐ Federal Republic of Germany

OPM Form 1300
Revised June 1993

Name (Last, First, MI) _____

Social Security Number [ ][ ][ ] [ ][ ] [ ][ ][ ][ ]

B. KNOWLEDGE AND EXPERIENCE

28. List each of your graduate level courses. You may list courses you anticipate taking during the next academic term.

CORE CURRICULUM COURSES	EMPHASIS OR SPECIALTY COURSES

29. List the number of graduate level courses taken or projected by graduation in each subject area.

a. Public or Government Administration/Management		l. Government Procurement/Contracts/Grants	
b. Community, City, and/or Regional Planning		m. International Affairs/Administration	
c. Business Management/Administration		n. Education	
d. Natural Resources/Environmental Sciences and Policy		o. International Economics	
e. Information Systems Management		p. Area Studies	
f. Computer Science/Application		q. Criminal Justice	
g. Human Resources/Labor Relations		r. Comparative Politics	
h. Technology/Engineering/Architecture		s. Public Health or Health Administration	
i. Finance/Budget/Accounting		t. Urban, City, and/or Regional Administration/Management	
j. Research Methods		u. Humanities	
k. Economics		v. Other Subject Areas not listed	

30. Was a public sector internship part of your graduate degree requirements? YES [ ] NO [ ]

1. Give the actual or proposed subject of your thesis, dissertation, or major academic research work.

Name (Last, First, MI) _____

Social Security Number

32. **PROFESSIONAL EXPERIENCE** (See Instructions)

- ☐ **a. Federal** (Non-Military) (Includes Federal Government or Congressional Employment
- ☐ **b. Private Sector** (Includes Self-Employment)
- ☐ **c. State or Local** (Includes State and Local Governments and intergovernmental Public Agencies)
- ☐ **d. Educational** (Teaching, Graduate Assistantships and Educational Administration)
- ☐ **e. Not-For-Profit** (Organizations or Associations)
- ☐ **f. Armed Services**

33. If you have lived overseas for more than 3 months, check appropriate box:

☐ 3-5 months ☐ 6-11 months ☐ 1-3 years ☐ more than 3 years

34. Academic Knowledge

35. Applied Knowledge

36. Applied Knowledge Experience

37. List up to three (3) foreign languages and check your degree of proficiency.

	Spoken: Excellent	Spoken: Good	Spoken: Fair	Written: Excellent	Written: Good	Written: Fair
a.						
b.						
c.						

38. Please check your proficiency with the following types of computer software and programming languages:

	Excellent	Good	Fair		Excellent	Good	Fair
a. Word Processing				f. BASIC			
b. Database				g. PASCAL			
c. Spreadsheet				h. FORTRAN			
d. Graphics				i. COBOL			
e. Operating Systems (DOS, UNIX)				j. "C"			

Name (Last, First, MI) _____

Social Security Number

C. ACADEMIC BACKGROUND

40. Name and location (City, State, and ZIP Code, if known) of all colleges or universities attended, beginning with your current school and working back.	Dates Attended		Credits Completed (Semester= S Quarter= Q)	Major Field of Study	GPA and Scale	Degree Title and Year Received, or Month and Year Experienced
	From	To				

D. WORK EXPERIENCE

41. In blocks a–e, describe in detail your work experience. Please account for ALL time over the past 10 years, or since high school, if applicable. Incorporate in your description of duties information about progression in your work assignments; the nature, variety, and complexity of your achievements; the scope and level of your responsibility and your relationship to other factors which help describe your job. Please list your work experience in chronological order, beginning with your most recent job. Do not submit agency or company position descriptions. Describe the experience in you own words.

May inquiry be made of your present employer regarding your character, qualifications, and record of employment? YES ☐ NO ☐

a. Name and Complete Address of Employer	Dates Employed From To	Salary or Earnings Beginning $ Per Ending $ Per	Avg Hrs Per Wk
	If Federal Service, Civilian, or Military Series, Grade, or Rank, and Date of Last Promotion	Exact Title of Your Position	

Name and Phone Number of Immediate Supervisor	Number and Kind of Employees You Supervised	Kind of Business or Organization

Reason for Leaving:

Description of Duties:

Name (Last, First, MI)

Social Security Number

D. WORK EXPERIENCE Continued

b. Name and Complete Address of Employer	Dates Employed From To	Salary or Earnings Beginning $ Per Ending $ Per	Avg Hrs Per Wk
	If Federal Service, Civilian, or Military Series, Grade, or Rank, and Date of Last Promotion	Exact Title of Your Position	

Name and Phone Number of Immediate Supervisor	Number and Kind of Employees You Supervised	Kind of Business or Organization

Reason for Leaving:

Description of Duties:

c. Name and Complete Address of Employer	Dates Employed From To	Salary or Earnings Beginning $ Per Ending $ Per	Avg Hrs Per Wk
	If Federal Service, Civilian, or Military Series, Grade, or Rank, and Date of Last Promotion	Exact Title of Your Position	

Name and Phone Number of Immediate Supervisor	Number and Kind of Employees You Supervised	Kind of Business or Organization

Reason for Leaving:

Description of Duties:

Name (Last, First, MI)

Social Security Number

D. WORK EXPERIENCE Continued

d. Name and Complete Address of Employer	Dates Employed From To	Salary or Earnings Beginning $ Per Ending $ Per	Avg Hrs Per Wk
	If Federal Service, Civilian, or Military Series, Grade, or Rank, and Date of Last Promotion	Exact Title of Your Position	

Name and Phone Number of Immediate Supervisor	Number and Kind of Employees You Supervised	Kind of Business or Organization

Reason for Leaving:

Description of Duties:

e. Name and Complete Address of Employer	Dates Employed From To	Salary or Earnings Beginning $ Per Ending $ Per	Avg Hrs Per Wk
	If Federal Service, Civilian, or Military Series, Grade, or Rank, and Date of Last Promotion	Exact Title of Your Position	

Name and Phone Number of Immediate Supervisor	Number and Kind of Employees You Supervised	Kind of Business or Organization

Reason for Leaving:

Description of Duties:

Name (Last, First, MI) _____

Social Security Number

E. ACTIVITIES AND ACHIEVEMENTS

42. List the major college, civic, business, and professional activities in which you have participated during the past five years. Describe the extent, duration, and level of your involvement. Also, list any awards or special recognition you have received for these activities. Do not list any information that you included under Item 41–Work Experience.

43. List any outstanding accomplishements, such as awards or publications, not mentioned above. (Maximum 10)

Name (Last, First, MI) _____

Social Security Number

F. The following questions are designed to give the selection committee a sense of: (1) your professional interest in the Federal service and your motivation for a Presidential Management Internship; and (2) the quality of your thinking and writing about issues of public policy and program management. **The answers to these questions must be typed in the blank space provided after each question (no additional sheets will be accepted).**

Item 44: Explain why you are seeking entry to the Federal service, describe your career interests, and explain the ways in which vou intend to contribute to public service.

Name (Last, First, MI) _____

Social Security Number

45: Select and analyze an issue of public policy or program management which is particular concern to you. Your discussion should be in the form of a policy recommendation and should include a factual description of the matter at issue, your opinion on it, your recommendations for changes, if any, and the reasons supporting your opinion and recommendations

Name (Last, First, MI) _____ Social Security Number ☐☐☐-☐☐-☐☐☐☐

Answer Items 46–50 by placing an "X" in the proper column.

	Yes	No
46. Veterans' Preference		
A. Have you served on active duty in the United States Military Service? If your only active duty was training in the Reserves or National Guard, answer "NO". If "NO", go to Item 47		
B. Were you honorably discharged from the military service? If your discharge was changed to "honorable" or "general" by a Discharge Review Board, answer "YES". "If you received a clemency discharge, answer "NO". If "NO", explain in Item 49 below *Include the date and type of discharge you received		
Note: A conviction or a firing does not necessarily mean you cannot be appointed.		
47. During the last 10 years, were you fired from any job for any reason, did you quit after being told that you would be fired, or did you leave by mutual agreement because of specific problems? If "YES", write in Item 49 below for each job: (a) the name and address of the employer; (b) the approximate date you left the job; and (c) the reason(s) why you left.		
48. **When answering questions A, B, C, D, and E, include convictions resulting from a plea of nolo contendre (no contest). You may omit:** (1) traffic fines of $100.00 or less; (2) any violation of law committed before your 16th birthday; (3) any violation of law committed before your 18th birthday, if finally decided in juvenile court or under a Youth Offender law; (4) any conviction set aside under the Federal Youth Corrections Act or similar State law; (5) any conviction whose record was expunged under Federal or State law.		
A. Have you **ever** been convicted of, or forfeited collateral for **any felony violation**? Generally, a **felony** is defined as any violation of law punishable by imprisonment of longer that one year, except for violations called misdemeanors under State law which are punishable by imprisonment of two years or less.		
B. Have you **ever** been convicted of or forfeited collateral for any **firearms** or **explosives** violations?		
C. Are you **now** under charges for **any** violation of law?		
D. During the **last 10 years** have you forfeited collateral, been convicted, been imprisoned, been on probation, or been on parole? Do not include violations reported in **A, B,** or **C** above		
E. Have you **ever** been convicted by a military **court-martial**? If no military service, answer "NO"		
F. Are you **delinquent** on any Federal debt? *(Include delinquencies arising from Federal taxes, loans, overpayment of benefits, and other debts to the U.S. Government **plus** defaults on Federal guaranteed or insured loans such as student and home mortgage loans)*		
IF YOU ANSWERED "YES" TO ANY PART OF ITEM 48 (A–E), GIVE DETAILS IN ITEM 49 BELOW. For each violation write the: (1) date; (2) charge; (3) place; (4) court; and (5) action taken. For question 48 (F), please explain the type, length and amount of the delinquency or default, and steps you are taking to correct error or repay the debt. Give any identification number associated with the debt and the address of the Federal agency involved.		

49. Additional space for answers (Write the number to which each answer applies. **If you need more space**, include your name and SSN on attached sheets

50. Signature, Certification, and Release of Information

YOU MUST SIGN THIS APPLICATION. Read the following carefully before you sign.

A false statement on any part of your application may be grounds for not hiring you, or for firing you after you begin work. Also, you may be punished by fine or imprisonment (U.S. Code, Title 18, Section 1001).

If you are a male born after December 31, 1959, you must be registered with the Selective Service System or have a valid exemption in order to be eligible for Federal employment. You will be required to certify as to your status at the time of appointment.

I understand that any information I give may be investigated as allowed by law or Presidential order, may be provided to agencies of the Federal Government, and may be used in support of the PMI selection process.

I consent to the release of information about my ability and fitness for Federal employment by employers, schools, law enforcement agencies and other individuals or organization, investigator, personnel staffing specialists, and other authorized employees of the Federal Government.

I consent to the release of information about the status of my application to university officials.

I certify that, to the best of my knowledge and belief, all of my statements are true, correct, complete, and made in good faith.

Signature *(Sign each application in dark ink)* | Date Signed *(Month, Day, Year)*

BILLING CODE 6325–01–C

Form Approved: OMB No. 3206–0082

Institutional Nomination Form

The Presidential Management Intern Program

Important Note: This form must be completed for each nominee and attached to the student's Application Form.

1. Name of Nominee

Social Security Number

I certify that the above-named student, an applicant for the Presidential Management Intern Program, is a student in good standing of this university, that this person has shown a clear interest in and a commitment to a career in the public service, is currently enrolled and is expected to receive an advanced degree during the current academic year. Furthermore, I certify that this student has been selected using competitive nomination procedures and has demonstrated academic excellence, sound judgment, capacity for leadership, and potential for future professional growth and development. Finally, I certify that this individual is one of the very best students in this university program and upon completion of this program, will fully meet all the criteria to be a nominee for the Presidential Management Intern Program.

2. Full Name of Dean or Department Chairperson Making This Nomination

3. Name and Address of Academic Institution

4. Title

5. Name of Graduate School or Program

6. Signature of Nominating Official

7. Date (*month, day, year*)

8. Office Phone Number (*including area code*)

9. Why was this individual selected as a PMI nominee? What criteria were used for nominee selection and how does this candidate meet them?

10. What do you see as this student's greatest growth or improvement during the period of his/her graduate education? What, if any, are the student's weaknesses?

11. Please supply a brief narrative citing specific examples of the student's strengths in the areas of intellectual ability; judgment; leadership and willingness to assume responsibility; ability to work effectively with others; commitment to public service; and personal initiative, such as that demonstrated in overcoming social/economic barriers in achieving education.

Form Approved: OMB No. 3206–0082

Independent Evaluation

The Presidential Management Intern Program

Name of Applicant:

The Presidential Management Intern (PMI) Program seeks to attract to the Federal service outstanding men and women from a variety of academic disciplines who have a clear interest in, and commitment to, a career in public service.

The above-named individual has been nominated for the PMI Program. A limited number of finalists (approximately 400 in recent years) are selected each year. To assist in the selection of interns, the Office of Personnel Management and the PMI Review Committee would like your evaluation of the nominee's personal characteristics and potential for public service. On what criteria do your judgments rest? How does this candidate meet them? We urge you to be as candid as possible, citing any particular incidents that illustrate the nominee's maturity, initiative, and potential. Your prompt submission of this form will be most helpful, as the nominee can neither complete his or her application nor be considered without your remarks. You should be aware, however, that this form, including your identity, is subject to release under the Privacy Act and the Freedom of Information Act, and upon request will be shown to the applicant.

Your evaluation will become part of the nominee's confidential file, intended for use by the PMI Review Committee. Please return this form, plus any additional sheets, in a sealed envelope to the nominee, who will submit the sealed envelope as part of the completed application package.

Thank you for your cooperation.

Name (First, Last, Middle)

Address (Street, City, State and ZIP Code)

Title

Business or Occupation

How long have you known the nominee?

In what capacity have you known the nominee?

Signature

Date Signed

Please continue on reverse side of this page and use additional sheets if necessary.

PMI Survey Form

The Presidential Management Intern Program

Name (Last, First, Middle Initial)

Social Security Number (SSN)

Important Information

You are requested to complete this form. The data you supply will be used for statistical analysis only. Submission of this information is voluntary. Your failure to do so will have no effect on the processing of your application. This form is authorized for use by the Office of Personnel Management ONLY. This form will be separated from all other application materials at Educational Testing Service prior to any screening or evaluation of individual nominees. This information will not be transmitted to OPM until after the screening and selection phases of the PMI process have been completed.

Your Social Security Number (SSN) is requested under the authority of Executive Order 9397 (November 22, 1943) for the orderly administration of personnel records.

Public burden reporting for this collection of information is estimated to take approximately two minutes per response, including time for reviewing instructions, searching existing data sources, and completing and reviewing the collection of information. Send comments regarding the burden estimates or any other aspect of this collection of information, including suggestions for reducing this burden, to U.S. Office of Personnel Management, Reports and Forms Officer, Rm. 500, Court House Square, 2300 Clarendon Blvd., Arlington, VA 22201.

Race and/or National Origin

The categories below provide descriptions of race and national origins. Read the Definition of Category descriptions and then check the box next to the category with which you identify yourself. If you are of mixed race and/or national origin, select the category with which you most closely identify yourself. NOTE: Please mark only ONE box!

Name of category	Definition of category
☐ A. American Indian or Alaskan Native.	A person having origins in any of the original peoples of North America, and who maintains cultural identification through community recognition or tribal affiliation.
☐ B. Asian or Pacific Islander	A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. For example, this area includes China, India, Japan, Korea, the Philippine Islands and Samoa.
☐ C. Black, not of Hispanic origin	A person having origins in any of the Black racial groups of Africa. This does not include persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish cultures or origins.
☐ D. Hispanic	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish cultures or origins.

Name of category	Definition of category
☐ E. White, not of Hispanic origin	A person having origins in any of the original peoples of Europe, North America, or the Middle East. This does not include persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish cultures or origins.
☐ F. Other	A person not included in another category.

Self-Identification of Handicap

(See instructions and Privacy Act information on reverse)

Last Name, First Name, Middle Initial

Birth Date (Mo./Yr.)

Social Security Number
Enter Code Here

Definition of a Handicap: A person is handicapped if he or she has a physical or mental impairment which substantially limits one or more major life activities: has a record of such impairment: or is regarded as having such impairment. Those handicaps that are to be reported are listed below (codes in numbers 13 through 94). In the case of multiple impairments, choose the code which describes the impairment that would result in the most substantial limitation.

To the Employee: Self-identification of handicap status is essential for effective data collection and analysis. The information you provide will be used for statistical purposes only and will not in any way affect you individually. While self identification is voluntary your cooperation in providing accurate information is critical.

01 I do not wish to identify my handicap status. *(Please read the employee note above and the reverse side of this form before using this code.)* (Note: Your personnel officer may use this code if, in his or her judgment, you used an incorrect code.)

05 I do not have a handicap.

06 I have a handicap but it is not listed below.

Speech Impairments

13 Severe speech malfunction or inability to speak; hearing is normal *(Examples: defects of articulation [unclear language sounds]; stuttering; aphasia [impaired language function]; laryngectomy [removal of the "voice box"])*

Hearing impairments

15 Hard of hearing *(Total deafness in one ear or inability to hear ordinary conversation, correctable with a hearing aid)*

16 Total deafness in both ears, with understandable speech

17 Total deafness in both ears, and unable to speak clearly

Vision Impairments

22 Ability to read ordinary size print with glasses, but with loss of peripheral (side) vision *(Restriction of the visual field to the extent that mobility is affected—"Tunnel vision")*

23 Inability to read ordinary size print, not correctable by glasses *(Can read oversized print or use assisting devices such as glass or projector modifier)*

24 Blind in one eye

25 Blind in both eyes *(Not usable vision, but may have some light perception)*

Missing Extremities

27 One hand

28 One arm

29 One foot

32 One leg

33 Both hands or arms

34 Both feet or legs

35 One hand or arm and one foot or leg

36 One hand or arm and both feet or legs

37 Both hands or arms and one foot or leg

38 Both hands or arms and both feet or legs

Nonparalytic Orthopedic Impairments

(Because of chronic pain, stiffness, or weakness in bones or joints, there is some loss of ability to move or use a part or parts of the body.)

44 One or both hands

45 One or both feet

46 One or both arms

47 One or both legs

48 Hip or pelvis

49 Back

57 Any combination of two or more parts of the body

Partial Paralysis

(Because of a brain, nerve, or muscle problem, including palsy and cerebral palsy, there is some loss of ability to move or use a part of the body, including legs, arms, and/or truck)

61 One Hand

62 One arm, any part

63 One leg, any part

64 Both hands

65 Both legs, any part

66 Both arms, any part

67 One side of body, including one arm and one leg

68 Three or more major parts of the body *(arms and legs)*

Complete Paralysis

(Because of a brain, nerve, or muscle problem, including palsy and cerebral palsy, there is a complete loss of ability to move or use a part of the body, including legs, arms, and/or trunk.)

70 One hand

71 Both hands

72 One arm

73 Both arms

74 One leg

75 Both legs

76 Lower half of body, including legs

77 One side of body, including one arm and one leg

78 Three or more major parts of the body *(arms and legs)*

Other impairments

80 Heart disease with no restriction or limitation of activity *(history of heart problems with complete recovery)*

81 Heart disease with restriction or limitation of activity

82 Convulsive disorder *(e.g., epilepsy)*

83 Blood disease *(e.g., sickle cell anemia, leukemia, hemophilia)*

84 Diabetes

86 Pulmonary or respiratory disorders *(e.g., tuberculosis, emphysema, asthma)*

87 Kidney dysfunctioning *(e.g., if dialysis [Use of an artificial kidney machine] is required)*

88 Cancer—a history of cancer with complete recovery

89 Cancer—undergoing surgical and/or medical treatment

90 Mental retardation *(A chronic and lifelong condition involving a limited ability to learn, to be educated, and to be trained for useful productive employment as certified by a State Vocational Rehabilitation agency under section 213.3102(t) of Schedule A)*

91 Mental or emotional illness *(A history of treatment for mental or emotional problems)*

92 Severe distortion of limbs and/or spine *(e.g., dwarfism, kyphosis [severe distortion of back])*

93 Disfigurement of face, hands, or feet *(e.g., distortion of features on skin, such as those caused by burns, gunshot injuries, and birth defects [gross facial birth-marks, club feet, etc.])*

94 Learning disability *(A disorder in one or more of the processes involved in understanding, perceiving, or using language or concepts [spoken or written]; e.g., dyslexia)*

The Rehabilitation Act of 1973 (P.L. 93–112) requires each agency in the Executive branch of the Federal Government to establish definite programs that will facilitate the hiring, placement and advancement of handicapped individuals. The best means of determining agency progress in this respect is through the production of reports at certain intervals showing such things as the number of handicapped employees hired, promoted, trained, or reassigned over a given time period, the percentage of handicapped employees in the work force and in various grades and occupations: etc. Such reports bring to the attention of agency top management, the Office of Personnel Management (OPM), and the Congress deficiencies within specific agencies or the Federal Government as a whole in the hiring, placement, and advancement of handicapped individuals and therefore, are the essential first step in improving these conditions and consequently meeting the requirements of the Rehabilitation Act.

The handicap data collected on employees will be used only in the production of reports

such as those previously mentioned and not for any purpose that will affect them individually. The only exception to this rule is that the records may be used for selective placement purposes and selecting special populations for mailing of voluntary personnel research surveys. In addition, every precaution will be taken to ensure that the information provided by each employee is kept in the strictest confidence and is known only to the one or two individuals in the agency Personnel Office who obtain and record the information for entry into the agency's and OPM's personnel systems. You should also be aware that participation in the handicap reporting system is entirely voluntary, with the exception of employees appointed under Schedule A, section 213.3103(t) (Mental Retardation); Schedule A, section 213.3102(u) (Severely Physically Handicapped); and Schedule B, section 213.3202(k) (Mentally Restored). These employees will be requested to identify their handicap status and if they decline to do so, their correct handicap code will be obtained from medical documentation used to support their appointment. No other employees will be required to identify their handicap status if they feel for any reason it is not in their best interest to have this information officially recorded outside of medical records. We request only that anyone not wishing to have this information entered in the agency's and OPM's personnel systems indicate this to their Personnel Office, rather than intentionally miscoding themselves, since false responses will seriously damage the statistical value of the reporting system.

[In those instances where the employee is or was hired under Schedule A, section 213.3102(t) (mental Retardation), the Personnel Director or his/her designee (a Vocational Rehabilitation Counselor may also be helpful) will assist the individual in completing this form and ensure that the employee fully understands the meaning of the form and the options available to him/her, as noted above.]

Employees will be given every opportunity to ensure that the handicap code carried in their agency's and OPM's personnel systems is accurate and is kept current. They may exercise this opportunity by asking their Personnel Officer to see a printout of the code and definition from their record, by notifying Personnel and any time their handicap status changes, and by initiating action in either of these cases to have the necessary changes made to their records. The code carried on employees in their agency's system will be identical to that carried in OPM's system, and any change to the agency records will result in the same change being made to OPM's records.

Your cooperation and assistance in establishing and maintaining an accurate and up-to-date handicap report system is sincerely appreciated.

Privacy Act Statement

Collection of the requested information is authorized by the Rehabilitation Act of 1973 (P.L. 93–112). The information you furnish will be used for the purpose of producing statistical reports to show agency progress in hiring, placement, and advancement of handicapped individuals to locate individuals for voluntary participation in surveys. The reports will be used to inform agency top management the Office of Personnel Management (OPM), the Congress, and the public of the status or programs for employment of the handicapped. All such reports will be in the form of aggregate totals and will not identify you in any way as an individual.

Solicitation of your Social Security Number (SSN) is authorized by Executive Order 9397, which requires agencies to use the SSN as the means for identifying individuals in personnel information systems. Your SSN will only be used to ensure that your correct handicap code is recorded along with the other employee information that your agency and OPM maintain on you. Furnishing your SSN or any other of the requested data for this collection effort is voluntary and failure to do so will have no effect on you. It should be noted, however, that where individuals decline to furnish their SSN, the SSN will be obtained from other records in order to ensure accurate and complete data.

Employees appointed under Schedule A, section 213.3102(t) (Mental Retardation), Schedule A, section 213. 3102(u) (Severely Physically Handicapped, or Schedule B, section 213.3202(k) (Mentally Restored) are requested to furnish an accurate handicap code, but failure to do so will have no effect on them. Where employees hired under one of these appointments fail to disclose their handicap, however, the appropriate code will be determined from the employee's existing records or medical documentation submitted to justify the appointment.

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–32510; File No. SR–PSE–92–15]

Self-Regulatory Organizations; Filing and Order Granting Accelerated Approval to Amendments and Order Approving Proposed Rule Change by the Pacific Stock Exchange, Inc., Relating to the Adjudication of Minor Rule Plan Violations

June 24, 1993.

I. Introduction

On April 17, 1992, the Pacific Stock Exchange, Inc. ("PSE" or "Exchange"), pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act")[1] and Rule 19b–4 thereunder,[2] filed with the Securities and Exchange Commission ("SEC" or "Commission") a proposed rule change which adds detailed procedures to the Exchange's Minor Rule Plan ("MRP")[3] and modifies the Exchange's summary sanction procedure.[4] The proposal also amends the following Exchange rules: (1) Exchange Rule 10.4 and other rules governing hearings and appeals; (2) Exchange Rule 6.2, governing admission to and conduct on the options trading floor; and (3) Exchange Rule 2.12, which establishes fines for the late filing of Financial and Operational Combined Uniform Single ("FOCUS") reports. The proposal also includes the late filing of Securities Investor Protection Corporation ("SIPC") reports in the Exchange's MRP.

The proposal was noticed for comment in Securities Exchange Act Release No. 31226 (September 23, 1992), 57 FR 45105.[5] No comments were received on the proposal.

Rule 19d–1(c)(2) under the Act authorizes national securities exchanges to adopt minor violation plans for the summary discipline and abbreviated

[1] 15 U.S.C. 78s(b)(1) (1982).

[2] 17 CFR 240.19b–4 (1992).

[3] The Exchange's MRP was approved by the Commission in 1985. See Securities Exchange Act Release No. 22654 (November 21, 1985), 50 FR 48853 (order approving File No. SR–PSE–85–24) ("MRP Approval Order").

[4] The Commission approved the PSE's summary sanction procedures in August 1989. See Securities Exchange Act Release No. 27162 (August 30, 1989), 54 FR 35969 (order approving File No. SR–PSE–89–08) ("Summary Sanction Approval Order").

[5] On September 30, 1992, the Exchange amended its proposal to (1) include a provision noting that changes in the Plan's Recommended Fine Schedule must be approved by the Commission; (2) delete from the MRP a rule prohibiting dual trading (violations of PSE Rule 6.38(a) will continue to be subject to full disciplinary proceedings); and (3) amend the MRP's Recommended Fine Schedule for position limit violations to conform the PSE's Recommended Fine Schedule to the schedule adopted by the Chicago Board Options Exchange, Inc. ("CBOE") for position limit violations. See Letter from Michael D. Pierson, Staff Attorney, PSE, to Thomas R. Gira, Branch Chief, Options Regulation, Division of Market Regulation ("Division") Commission, dated September 30, 1992 ("Amendment No. 1"). Subsequently, the PSE submitted an additional technical amendment. See Letter from Michael D. Pierson, Staff Attorney, PSE, to Thomas R. Gira, Branch Chief, Options Regulation, Division, Commission, dated October 1, 1992 ("Amendment No. 2"). On November 1, 1992, the PSE submitted a third amendment, which modifies proposed Exchange Rule 10.13(j)(3) to include in the MRP only SIPC reports filed no later than five business days after the receipt of SIPC's final delinquency notice ("Amendment No. 3"). On May 21, 1993, the PSE submitted a fourth amendment to clarify that SIPC reports filed five days after a member's receipt of SIPC's final notice will result in formal disciplinary action. See Letter from Michael D. Pierson, Senior Attorney, Market Regulation, PSE, to Yvonne Fraticelli, Staff Attorney, Options Branch, Division, Commission, dated May 21, 1993 ("Amendment No. 4"). Finally, the Exchange modified its proposal by deleting a provision which would have included late FOCUS Reports in the MRP. Late FOCUS reports will continue to be governed by PSE Rule 2.12(b). See Letter from Michael D. Pierson, Senior Attorney, Market Regulation, PSE, to Yvonne Fraticelli, Staff Attorney, Options Branch, Division, Commission, dated June 11, 1993 ("Amendment No. 5").

reporting of minor rule violations by exchange members and member organizations.[6] As noted above, the Commission approved the Exchange's MRP in 1985[7] and approved its summary sanction procedure in 1989.[8]

II. Description of the Proposal

1. Amendments to the MRP

The PSE's proposal is designed to streamline the Exchange's disciplinary process by allowing cases decided under the MRP to be resolved without the issuance of a formal complaint and without a formal hearing. Specifically, proposed PSE Rule 10.13, entitled "Minor Rule Plan," authorizes the PSE's Executive Committee, Ethics and Business Conduct Committee, Options Floor Trading Committee, and Equity Floor Trading Committee to impose a fine of up to $5,000 for violations of Exchange Rules included in the MRP.[9] Under the MRP, the PSE will serve a person or organization accused of a minor rule violation with a written statement setting forth: (1) The Exchange Rule(s) alleged to have been violated; (2) the act or omission constituting each violation; and (3) notice that the accused person or organization may submit a written statement to a designated committee for its consideration.[10]

The payment of a fine imposed under the MRP is deemed to be a waiver of any right to a disciplinary proceeding under Exchange Rule 10.11 and of any right to a review of the matter by the Exchange's Board of Governors. However, proposed PSE Rule 10.13(e) allows a person or organization fined under the MRP to contest the fine by filing a written application with the PSE's Compliance Department within five business days after receipt of written notification of the fine. A determination contested pursuant to paragraph (e) becomes a formal disciplinary action and penalties imposed by a hearing panel will be reported publicly to the Exchange membership after the decision has become "final" pursuant to Exchange Rule 10.7. Although the MRP provides recommended fines for each type of rule violation, the Exchange is not required to impose a fine according to the MRP. In addition, the proposal gives the Exchange discretion to determine that a violation is not minor in nature and commence a disciplinary proceeding under PSE Rule 10.3, rather than under the MRP.

The PSE proposes to add violations of the following Exchange rules to the MRP: (1) Failure to remain for a specified amount of time after trade processing (Exchange Rule 6.17); (2) failure to honor a ten-up market (Exchange Rule 6.86); (3) failure to identify an order as for a broker-dealer under the ten-up rule (Exchange Rule 6.86(a)); (4) improper vocalization of a trade (Exchange Rules 6.69, 6.73, an Options Floor Procedure Advice ("OFPA") G–10); (5) disruptive action involving physical contact while on the trading floor (Exchange Rule 6.2); (6) use of abusive language on the trading floor (Exchange Rule 6.2); (7) minor position limit violations (Exchange Rule 6.8); (8) minor exercise limit violations (Exchange Rule 6.9); (9) failure to submit trade data to the Exchange in a timely manner (Exchange Rule 10.2(c)); and (10) failure to file a SIPC Form SIPC–6 or Form SIPC–7 in a timely manner (Exchange Rule 2.12(a)).

As noted above, under proposed Exchange Rule 10.13(g), a floor official and/or an options OBO[11] may issue a floor citation for violations of the floor decorum and minor trading rules listed under the MRP in proposed Exchange Rule 10.13(h) and (i).[12] Paragraph (g) states that the circumstances underlying the issuance of each floor citation under the MRP shall be reviewed by a designated committee to determine the sufficiency of the evidence supporting the violation.

2. Recommend Fine Schedule for MRP Violations

The Recommended Fine Schedule for MRP violations was approved by the Commission in 1985[13] and amended in 1989.[14] The Exchange proposes to establish or increase the amount of the recommended fines for a number of MRP violations. For example, the Recommended Fine Schedule provides a maximum fine of $1,000 for disruptive action involving physical contact on the trading floor, and a maximum fine of $750 for failure to honor a ten-up

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[6] See Securities Exchange Act Release No. 21013 (June 1, 1984), 49 FR 23826 (order approving amendments to paragraph (c)(2) of Rule 19d–1 under the Act). Under paragraph (c)(2) of Rule 19d–1, as amended, any disciplinary action taken by a self-regulatory organization ("SRO") for violation of the SRO's rules that has been designated a minor rule violation pursuant to the plan shall not be considered "final" for purposes of section 19(d)(1) of the Act if the sanction imposed consists of a fine not exceeding $2,500 and the sanctioned person has not sought an adjudication, including a hearing, or otherwise exhausted his or her administrative remedies. By deeming unadjudicated, minor violations as not final, the Commission permits SROs to report violations on a periodic basis rather than an immediate basis.

[7] See MRP Approval Order, *supra* note 3.

[8] See Summary Sanction Approval Order, *supra* note 4.

[9] As noted in proposed PSE Rule 10.13(e), pursuant to Securities Exchange Act Release No. 30958, any person or organization found in violation of a minor rule under the MRP is not required to report such violation on SEC Form BD, provided that the sanction imposed consists of a fine not exceeding $2,500 and the sanctioned person or organization has not sought an adjudication, including a hearing, or otherwise exhausted the administrative remedies available with respect to the matter. Accordingly, any fine imposed in excess of $2,500 will be subject to reporting on SEC Form BD in addition to the immediate, rather than periodic, reporting requirement of section 19(d)(1) of the Act. See note 6, *supra*. See also Securities Exchange Act Release No. 30180 (January 22, 1992), 57 FR 59311 (noting that fines in excess of $2,500, assessed under New York Stock Exchange, Inc. ("NYSE") Rule 476A, are not considered pursuant to the NYSE's minor rule violation plan and are thus subject to the current reporting requirements of section 19(d)(1) of the Act).

[10] As discussed more fully below, paragraph (g) of proposed PSE Rule 10.13 will allow a floor official and/or an options Order Book Official ("OBO") to issue a floor citation for violations of proposed paragraph (h), "Minor Rule Plan: Options Floor Decorum and Minor Trading Rule Violations," and proposed paragraph (i), "Minor Rule Plan: Equity Floor Decorum and Minor Trading Rule Violations." Under the proposal, citations issued pursuant to proposed paragraph (g) are reviewed by a designated committee which determines whether there is sufficient evidence to find a violation of the Exchange's rules. Proposed PSE Rule 10.14, "Summary Sanction Procedure," allows two floor officials to issue a citation and to impose a fine for violations of the rules specified in paragraphs (b) and (c) of proposed rule 10.14. Although several of the same rule violations are included in both proposed PSE Rule 10.13 and in proposed PSE Rule 10.14, proposed PSE Rule 10.13(g) provides that designated committees will review floor citations "Except as provided in PSE Rule 10.14 * * *." Thus, although several of the same violations are included in both proposed rules, proposed PSE Rule 10.13(g) prevents a member from being sanctioned under both proposed PSE Rule 10.13 and proposed PSE Rule 10.14 for the same offense. Telephone conversation between Michael D. Pierson, Senior Attorney, Market Regulation, PSE, and Yvonne Fraticelli, Staff Attorney, Options Branch, Division, Commission, on June 23, 1993.

[11] Currently, on the options trading floor, a floor citation may only be issued by two floor officials. See PSE Rule 6.2, Commentary .05.

[12] Paragraph (h) lists 22 MRP violations, including, among other things, a floor broker's failure to use due diligence in the handling or execution of an order; a floor broker's failure to record a change in the limit or size of an order; a floor broker's improper execution of a cross transaction; a market maker's failure to respond to an OBO's call for market makers or to respond to demands for bids and/or offers; a member's inadvertent placement of a non-public order with an OBO; a member's failure to honor a ten-up market or to identify a broker-dealer order under the ten-up rule; improper communication on the floor by use of hand signals; improper vocalization of a trade; violations of standards of conduct or dress or disruptive action on the trading floor; and minor position and exercise limit violations. Under Exchange Rule 10.13(i), equity floor decorum violations involving, among other things, member conduct on the equity floor, use of badges on the equity floor, proper time stamping of trade tickets, and proper reporting of transactions executed at the Exchange, are also included in the MRP. See discussion, *supra*, on proposed additions to the MRP.

[13] See MRP Approval Order, *supra* note 3.

[14] See Securities Exchange Act Release No. 27162 (August 30, 1989), 54 FR 35969 (order approving File No. SR–PSE–89–08).

market and for improper communication on the trading floor. In addition, the Recommended Fine Schedule imposes the following sanctions for positions or exercise limit violations, each with a minimum letter of $100: (1) For one to three violations, an informal letter of caution plus $1 per contract over 5% of the applicable limit; (2) for four to six violations, $1 per contract over the limit; and (3) for seven or more violations, $5 per contract over the limit. While the Exchange does not intend to publish the Fine Schedule itself in the Rules of the Board of Governors, the PSE represents that the schedule will be circulated to the Exchange membership periodically.

3. Summary Sanction Procedure

Proposed Exchange rule 10.14, entitled "Summary Sanction Procedure," which applies to both the equity and the options floors, allows two floor officials to issue a floor citation for infractions involving, among other things, violations of a standard of conduct or dress on the trading floor, disruptive actions on the trading floor, failure to act in a professional manner, failure to time stamp an order ticket, and failure to report a transaction properly. When issuing a summary sanction, two floor officials must issue a floor citation and apprise the person cited of the alleged violation, notify the PSE's Compliance Department of the alleged violation, and indicate on the citation the amount of the fine. The violations subject to the Summary Sanction Procedure are also included in the MRP. Accordingly, the violations subject to the Summary Sanction Procedure may be adjudicated either through the summary procedures or through the MRP.[15] Sanctions imposed under proposed Exchange Rule 10.14 may be appealed pursuant to Exchange Rule 10.11.

4. Amendments to Rules Governing Hearings and Appeals

The PSE proposes to amend Exchange Rule 10.11, to be entitled "Appeal of Floor Citations and Minor Rule Plan Sanctions," to make Exchange Rule 10.11 applicable to MRP violations. Exchange Rule 10.11 allows an aggrieved person to apply to the Exchange's Compliance Department for review of a contested sanction. A person seeking review under Exchange Rule 10.11 may request permission to make an oral presentation or may request that the matter be reviewed solely on the basis of written documentation.

In addition, the PSE proposes to amend Exchange Rule 10.4, entitled "Hearing," to provide for: (1) 15 calendar days notice of the hearing date and statement of the matters to be considered; (2) an opportunity to object to the composition of the hearing panel; and (3) the furnishing to the parties of witness lists and documentary evidence.

5. Amendments to Rules Governing Admission to and Conduct on the Options Trading Floor

The PSE proposes to amend Exchange Rule 6.2, entitled "Admission to and Conduct on the Options Trading Floor," in order to make Exchange Rule 6.2 consistent with a similar rule (EFPA 1–B) governing conduct on the equity trading floor. In addition, the PSE proposes to delete OFPA F–4 from its rules and to incorporate its provisions, with minor revisions, into Exchange Rule 6.2.

The proposed amendments to Exchange Rule 6.2 make more specific the types of conduct prohibited in connection with the Exchange's standards of dress and conduct. In general, Exchange Rule 6.2 requires that all persons on the options trading floor be dressed in a manner appropriate for business purposes and that all persons on the options trading floor conduct themselves in a seemly and professional manner.

6. Fines and Charges for Late FOCUS and SIPC Reports

The Exchange proposes to amend Exchange Rule 2.12, entitled "Financial Reports," to double the charge imposed for a member organization's late filing of a Report of Financial Condition on SEC Form X–17A–5. Specifically, for reports 1–30 days late, the charge will increase from $100 to $200; for reports 31–60 days late, the charge will increase from $200 to $400; for reports 61–90 days late, the charge will increase from $400 to $800.[16]

The PSE proposes to include cases involving later filings of SIPC reports in the MRP.[17] Currently, those cases must be resolved by a hearing panel of the Ethics and Business Conduct Committee, unless the matter is resolved by offer of settlement or default judgment. The MRP's Recommended Fine Schedule imposes the following fines for late filings of Form SIPC–6 and Form SIPC–7 reports: first violation, $1,200; second violation $1,800; and third violation, $2,400.

III. Discussion

The Commission finds that the proposed rule changes are consistent with the requirements of the Act and the rules and regulations thereunder, and, in particular, with the requirements of Sections 6(b)(5), 6(b)(6), and 6(b)(7) of the Act.[18]

Section 6(b)(5) of the Act requires that the rules of an exchange protect investors and the public interest. Section 6(b)(6) of the Act requires that the rules of the Exchange provide that its members be appropriately disciplined for violations of the Act, the rules and regulations thereunder, and the Exchange's rules. The Commission believes that amended MRP and the Summary Sanction Procedure should provide fair procedures for appropriately disciplining members and member organizations for minor rule violations that warrant a sanction more severe than a warning or cautionary letter, but for which a full disciplinary proceeding would be unsuitable because such a proceeding would be costly and time-consuming in view of the minor nature of the violation.[19] In this regard, the Commission believes that because the rule violations contained in the MRP and the Summary Sanction Procedure are either objective or technical in nature, and are easily verifiable, they lend themselves to the use of expedited proceedings. For example, noncompliance with the Exchange's position and exercise limits, or the late filing of SIPC reports, are matters which may be determined objectively and adjudicated quickly without the complicated factual and interpretive inquiries associated with more sophisticated Exchange disciplinary proceedings.

The Commission notes that the fine schedules proposed by the PSE are graduated to account for repeat offenders and that the Exchange may commence a formal disciplinary proceeding under Exchange Rule 10.3 if it determines that a violation otherwise

[15] As noted above, a member will not be prosecuted under both the MRP and the Summary Sanction Procedure for the same offense. See note 10, *supra*.

[16] The filing of later FOCUS reports will not be included in the PSE's MRP. See Amendment No. 5, *supra* note 5.

[17] As noted above, the PSE amended its proposal to provide that only SIPC reports filed no later than five business days after the receipt of SIPC's final notice will be included in the MRP, and to clarify that SIPC reports filed later than five business days after the receipt of SIPC's final notice will result in formal disciplinary proceedings. See Amendment Nos. 3 and 4, *supra* note 5.

[18] 15 U.S.C. 78f(b) (5), (6), and (7) (1988).

[19] The Commission notes that under both the MRP and the Summary Sanction Procedure, the Exchange retains the discretion to bring full disciplinary proceedings. The Commission expects the PSE to bring full disciplinary proceedings where appropriate, for example, in cases of egregious or repeated violations of rules subject to the MRP or the Summary Sanction Procedure.

covered by the MRP or the Summary Sanction Procedure is not minor in nature. Accordingly, the Commission believes that the proposed fine schedules will result in appropriate discipline, which should further ensure the protection of investors and the public interest. In addition, the PSE has represented that the Recommended Fine Schedule will be circulated periodically to members of the Exchange. The Commission believes that the publicizing of the fine schedule enhances the fairness of the MRP and the Summary Sanction Procedure.

Section 6(b)(7) of the Act requires the rules of the Exchange to "provide a fair procedure for the disciplining of members and persons associated with members * * *." The Commission believes that the PSE's amended MRP and Summary Sanction Procedure should allow the Exchange to impose prompt, effective and appropriate discipline without compromising respondents' rights to "fair procedures" in PSE disciplinary proceedings. As noted above, the rule violations included in the amended MRP and the Summary Sanction Procedure are easily verifiable, which reduces the risk that a fine would be imposed erroneously under the MRP or under the Summary Sanction Procedure. In addition, floor citations imposed pursuant to Exchange Rule 10.13(g) will be subject to committee review.

Further, the Commission notes that the MRP and the Summary Sanction Procedure provide procedural rights to persons who are fined (*i.e.*, notification of the rules allegedly violated, the act or omission constituting the violation and the fine imposed) and permits them to contest the imposition of the fine. Specifically, a person or organization fined under the MRP may contest the fine by filing a complaint with the PSE's Compliance Department pursuant to Exchange Rule 10.13(e) or by appealing the sanction in accordance with the procedures under Exchange Rule 10.11. A person or organization fined under the Summary Sanction Procedure may appeal the sanction under Exchange Rule 10.11. The Commission believes that the right to appeal sanctions imposed under both the MRP, including floor citations, and the Summary Sanction Procedure, will help to safeguard the procedural rights of sanctioned persons while preserving the Exchange's ability to adjudicate minor rule violations in a timely and efficient manner through the MRP and the Summary Sanction Procedure.

In addition, with regard to the Summary Sanction Procedure, the Commission continues to believe, as it did in approving the PSE's original summary sanction procedure proposal, that the safeguards built into the Exchange's summary sanctions (*i.e.*, the issuance of citations by two floor officials, the right to appeal summary sanctions, and the adherence to a Recommended Fine Schedule) adequately ensure that the due process rights of PSE members are not diminished.[20] The Commission notes, in addition, that the PSE's Summary Sanction Procedure is similar to procedures approved previously by the Commission.[21]

In summary, the Commission believes that the MRP and the Summary Sanction Procedure will provide effective deterrence and fair procedures for sanctioning members for minor rule violations. Specifically, the Commission believes that the amended MRP and the Summary Sanction Procedure will enhance the Exchange's enforcement capabilities by providing streamlined procedures for the adjudication of minor rule violations consistent with adequate due process. Moreover, by allowing minor rule violations to be processed in an expedited manner, the MRP and the Summary Sanction Procedure will permit more Exchange resources to be allocated to more complex and serious alleged violations of the Exchange's rules and the federal securities laws, and, therefore, will help to ensure that appropriate and fair discipline is imposed in those cases.

The Commission also believes that the amendments to Exchange Rule 10.4, which concern hearings in the course of formal disciplinary proceedings, providing for (1) 15 calendar days notice of the hearing date and statement of the matters to be considered, (2) and opportunity to object to the composition of the hearing panel, and (3) the furnishing to the parties of witness lists and documentary evidence, will help to ensure the procedural fairness of the Exchange's hearings. In particular, 15-day calendar notice of the matters to be considered, and the availability of witness lists and documentary evidence, should help to provide the parties with sufficient time to prepare their cases. In addition, providing parties with the opportunity to object to the composition of the hearing panel should help to ensure the integrity of the disciplinary process and that such hearings take place before qualified and impartial judges.

Finally, the Commission believes that the amendments to Exchange Rule 6.2, which make the rules governing conduct on the Exchange's options floor consistent with the rules governing conduct on the Exchange's equity floor, help to clarify and simplify the Exchange's rules by providing a uniform standard of conduct. The Commission also notes that standards of dress and conduct provided in the revised Exchange Rule 6.2 are similar to rules approved previously by the Commission.[22] The Commission believes that Exchange Rule 6.2, as amended, defines prohibited conduct with sufficient specificity to provide members with adequate notice of impermissible conduct. In addition, the Commission finds that the deletion of OFPA F–4, and its incorporation into Exchange Rule 6.2, helps to clarify the Exchange's rules and is consistent with the Exchange's plan to incorporate the OFPAs into the rules of the Exchange.[23]

Based on the above, the Commission has found that the rule changes are consistent with sections 69b)(5), (6), and (7) of the Act.

The Commission finds good cause for approving Amendment Nos. 1, 2, 3, 4, and 5 to the proposed rule change prior to the thirtieth day after the date of publication of notice of filing thereof in the **Federal Register**. First, Amendment Nos. 1 and 5 remove several rules from the MRP and conform the PSE's Recommended Fine Schedule to the schedule adopted previously by the CBOE. The Commission believes that these amendments strengthen the PSE's proposal and do not raise new regulatory issues. Second, Amendment Nos. 3 and 4 clarify the proposal by providing that only SIPC reports filed later than five business days after the receipt of SIPC's final notice are included in the MRP, and that SIPC reports filed later than five days after the receipt of SIPC's final notice will be subject to formal disciplinary proceedings. Finally, Amendment No. 2 is a technical correction and raises no new regulatory issues. Therefore, the Commission believes it is consistent with sections 6(b)(5) and 19(b)(2) of the Act to approve Amendments Nos. 1, 2, 3, 4, and 5 to the proposal on an accelerated basis.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning Amendment Nos.

[20] See Summary Sanction Approval Order, *supra* note 4.

[21] See Securities Exchange Act Release No. 21918 (April 3, 1985), 50 FR 14068 (order approving American Stock Exchange File No. 4–260).

[22] See CBOE Rule 6.20(b).

[23] See Securities Exchange Act Release No. 27903 (April 13, 1990), 55 FR 15075 (order approving File No. SR–PSE–89–24).

1, 2, 3, 4, and 5. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the Commission's Public Reference Section, 450 Fifth Street, NW., Washington, DC. Copies of such filing will also be available for inspection and copying at the principal office of the above-mentioned self-regulatory organization. All submissions should refer to the file number in the caption above and should be submitted by July 22, 1993.

It is therefore ordered, pursuant to section 19(b)(2) of the Act,[24] that the proposed rule change (File No. SR–PSE–92–15) be, and hereby is approved.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.[25]

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 93–15496 Filed 6–30–93; 8:45 am]

BILLING CODE 8010–01–M

[Release No. 34–32509; File No. SR–PSE–93–05]

Self-Regulatory Organizations; Filing and Immediate Effectiveness of Proposed Rule Change by the Pacific Stock Exchange, Inc. Relating to Reduced Automated System Access Privilege ("ASAP") Membership Fees

June 24, 1993.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on April 16, 1993, the Pacific Stock Exchange, Inc. ("PSE" or "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

[24] 15 U.S.C. 78s(b)(2) (1982).

[25] 17 CFR 200.30–3(a)(12) (1992).

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The PSE is proposing to amend its General Membership Fees published in its Schedule of Exchange Rates by lowering its fee for Automated System Access Privilege ("ASAP") Membership.[1] The Exchange proposes to amend its fee schedule as follows:[2]

A. PSE GENERAL MEMBERSHIP FEES

ASAP MEMBERSHIP (Automated System Access Privilege): [$6,000 per year (nonrefundable)] $4,000 per year (nonrefundable)

II. Self-Regulatory Organization's Statement of the Purpose of and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange is proposing to lower its ASAP Membership fee from $6000 per year to $4,000 per year.[3] The Exchange is proposing this rule change in order to make its ASAP Membership Program more attractive to potential members and to make the Exchange a more competitive marketplace for the execution of securities transactions.

2. Statutory Basis

The proposed filing is consistent with section 6(b)(4) of the Act in that it provides for the equitable allocation of reasonable charges among its members and persons using its facilities.[4]

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

Written comments on the proposed rule change were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change establishes or changes a due, fee, or other charge imposed by the Exchange and therefore has become effective pursuant to section 19(b) (3) (A) of the Act and subparagraph (e) of Rule 19b-4 thereunder. At any time within 60 days of the filing of such proposed rule change, the Commission may summarily abrogate such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC. 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the

[1] On August 13, 1990, the Commission approved a PSE proposed rule change which created an electronic access membership, known as ASAP, for non-regular member broker-dealers. The ASAP system allows certain qualified broker-dealers ("ASAP Members") access to the Exchange's automated trading systems, including its electronic execution system, Securities Communication Order Routing and Execution System ("SCOREX") and its automated options trading system, Pacific Options Exchange Trading System ("POETS"), as well as any other electronic systems approved by the PSE Board of Governors. While an ASAP member is not a regular member of the Exchange, an ASAP member must be a broker-dealer registered under Section 15 of the Act, and must agree to abide by the Constitution, Rules, and Procedures of the Exchange, and consent to the disciplinary and arbitration jurisdiction of the Exchange, to the extent that such jurisdiction would relate to the dealings of the ASAP Member on the Exchange. See Securities Exchange Act Release No. 28335 (August 13, 1990), 55 FR 34106 (August 21, 1990) (order approving File No. SR–PSE–90–09).

[2] Underlining indicates material to be added; brackets indicate material to be deleted.

[3] In order to receive electronic access, the ASAP Member must pay a nonrefundable, nontransferable annual fee, which the Exchange's Board of Governors is empowered to amend each year. However, if an ASAP member becomes a regular member of the Exchange, the fee paid for the current year is subject to rebate, prorated to the date of approval. The ASAP Membership fee has been $6000 since its inception in 1990. See PSE Notice to Members Numbers ML–89–69, attached as Exhibit "A" to File No. SR–PSE–90–09.

[4] 15 U.S.C. 78f(b)(4) (1988).

proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the Commission's Public Reference Section, 450 Fifth Street, NW., Washington, DC 20549. Copies of such filing will also be available for inspection and copying at the principal office of the PSE. All submissions should refer to File No. SR–PSE–93–05 and should be submitted by July 22, 1993.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 93–15497 Filed 6–30–93; 8:45 am]

BILLING CODE 8010–01–M

[Release No. 34–32514; File No. SR–PSE–92–42]

Self-Regulatory Organizations; Filing of Proposed Rule Change and Amendment No. 1 by Pacific Stock Exchange, Inc. Adopting Listing Requirements for Common Stock that Qualifies Under the Small Corporate Offering Registration Classification

June 25, 1993.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on November 9, 1992, the Pacific Stock Exchange, Inc. ("PSE" or "Exchange") filed with the Securities and Exchange Commission ("Commission"] the proposed rule change as described in Items I, II and III below, which Items have been prepared by the self-regulatory organization. On April 23, 1993 the PSE submitted to the Commission Amendment No. 1 which includes new provisions and seeks to clarify the language of the proposed rule change.[1] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The PSE is submitting this rule filing in order to permit the Exchange listing and trading of common stock that qualifies under the Small Corporate Offering Registration ("SCOR") designation. The complete text of the proposed rule amendments was attached to this rule filing as Exhibit A.

II. Self-Regulatory Organization's Statement of the Purpose of and Statutory Basis for the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange is proposing to list and trade common stock that, at the time of the offering, qualifies under the SCOR designation. Under the proposal, these securities will include all common stock of a class that has been (i) issued pursuant to Regulation A under the Securities Act of 1933 ("Securities Act"), or (ii) issued pursuant to Form U-7 of the North American Securities Administrative Association ("NSSAA")[2] (or a state variation of such form with substantially similar requirements) and issued pursuant to Rule 504 under the Securities Act. Since such securities are not currently listed or traded on any national securities exchange, the PSE believes that the implementation of the Exchange's proposal will facilitate the capital formation process for small companies and will supply much needed liquidity to public investors within a regulated marketplace. In addition, under the proposal, companies will be afforded all of the benefits of an Exchange listing, with the exception of the Blue Sky exemption from state securities registration requirements and automatic marginability.

In August 1992, the Commission adopted certain rules as part of its Small Business Initiatives program.[3] The program includes, in part, substantive changes to the "small issues" exemption from registration requirements under the Securities Act (Regulation A), as well as changes to the "seed capital" registration exemption pursuant to Rule 504 under the Securities Act. These revisions are designed to facilitate the access of small companies to capital markets and to reduce the costs of compliance with the federal securities laws.

Rule 504. The Commission's modifications to Rule 504 include the elimination of several restrictions and other changes that would allow small companies to conduct public offerings of up to $1 million in unrestricted securities during a twelve-month period. These changes are designed to allow small companies to market offerings directly to prospective investors by bypassing both the venture capital and small underwriting houses. At the state level. offerings may be registered using the SCOR registration form, Form U-7; however, such limited offering must also qualify under state Blue Sky laws that require delivery of a prospectus, offering circular, or disclosure document to all purchasers prior to sale. The Form U-7 has been supported,by the American Bar Association as well as NASAA.

As of February 1993, the following thirty-one states have adopted regulations governing the registration of small corporate offerings using the Form U–7: Alaska, Arizona, California, Colorado, Connecticut, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Washington, Wisconsin, and Wyoming. In addition, six states, Arkansas, Georgia, Louisiana, South Dakota, Virginia, and West Virginia, unofficially recognize the filing of Form U–7 to register small corporate offerings by qualification or by exemption.[4]

Regulation A. The Commission recently revised Regulation A to exempt from registration public offerings of up to $5 million in a twelve-month period. The disclosure requirements are embodied in the offering statement (SEC Form 1–A), and consists of three parts. The offering circular is contained in Part

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[1] See letter from Michael D. Pierson, Senior Attorney, PSE to Elizabeth M. Cosgrove, Esquire, Commission, dated April 20, 1993, which, among other things, adds: listing maintenance criteria, certain listing requirements relating to corporate governance, and a limit for issuers to one class of voting stock. Amendment No. 1 also makes a number of minor changes for stylistic and clarification purposes.

[2] In formulating the listing requirements set forth in this proposal, the Exchange consulted extensively with the Small Business Capital Formation Committee of NASAA, and many of their suggestions have been incorporated into the proposed program.

[3] See Securities and Exchange Commission Release Nos. 33–6949, 34–30968, 39–2287 (July 30, 1992), 57 FR 36442 (August 13, 1992).

[4] See Small Corporate Offering Registration Program and Form U–7, 1 Blue Sky Law Reporter (CCH) 6461 (February 1993).

II and may be prepared in three alternative formats, one of which permits the use of the same simplified disclosure statement (Form U–7) that is prescribed in SCOR offerings.

These changes to Regulations A and D, in conjunction with the efforts of several states that are in the forefront of the small business movement, will clearly benefit both the investing public as well as small companies seeking access to capital markets. The expanded use of the Form U–7 in Regulation A offerings will encourage a more effective and simplified system of raising capital. The collective efforts of federal and state agencies to streamline the registration process for small corporate offerings are especially important because the institutional venture capital industry has substantially abandoned the financing of small start-up companies, leaving them the private offering market as the only remaining source of capital. Therefore, the development of the SCOR program has made corporate offerings more flexible and less costly to small companies, without compromising investor protection.

Initial and Continued Listing Requirements. The Exchange has in place a regulatory program that will ensure close scrutiny of any company applying to list its common stock under the SCOR program. The listing qualification process for SCOR applicants will be the same as the process in place for other PSE-listed equity issuers. The merit review process is coordinated by the Exchange's Listing Department, which works directly with the Equity Listing Committee. This Committee, which is comprised of floor members, "upstairs" members and member firm representatives, has substantial collective experience in the evaluation of companies for possible listing on the Exchange.

The Exchange has developed special listing requirements that are designed to ensure a minimum level of financial performance by issuers under the SCOR program. First, at the time of application and formal request for listing, the initial offering must constitute at least 200,000 publicly held shares with an aggregate market value of at least $1 million. Second, the offering price per share must be at least $5.00 and have a minimum public distribution of 250 beneficial holders. Third, the company must have total net tangible assets of at least $500,000 or shareholders' equity of at least $1 million. Fourth, the issuer must have specific corporate governance policies which the PSE intends to propose in the future.[5] Fifth, a company listing its common stock under the SCOR designation is limited to one class of voting common stock, so that the number of shares for which the company applies is equal to the total number of shares currently issued and outstanding, plus the number of shares authorized for future issuance (for specific purposes). Finally, the issuer must either register the common stock with a state securities agency that has adopted the Form U–7 format or register it with the Commission pursuant to a Form 1–A offering statement (or substantially equivalent registration form).

In addition, under the proposal, once an issuer's common stock has been approved for listing under the SCOR program, the following requirements must also be met: First, the issuer's common stock must be registered under section 12(b) of the Act (before it may be traded on the Exchange). Second, the issuer must comply with the Exchange's listing policies and agreements, as well as the reporting and disclosure requirements of the Act. Third, in connection with any listing on the Exchange of additional shares of the company's common stock, the issuer must meet the applicable registration requirements of the Securities Act. Fourth, any sale of the company's common stock by an "affiliate" of the issuer, and any sale by any person of "restricted securities," must comply with the resale limitations of Rule 144 under the Securities Act. Fifth, an issuer listed under the SCOR program must comply with the Exchange's listing maintenance requirements set forth in Rule 3.5(h).[6] Finally, an issuer would have to meet either the Tier I or Tier II listing requirements for common stock under PSE Rule 3.2(c)[7] within 36 months after the effective date of the section 12(b) registration statement filed pursuant to the Act. The Exchange believes that such time frame is reasonable because the Tier I and Tier II listing criteria would require the issuer to have an operating history of at least three continuous years. (Once the company has been elevated to either Tier I or Tier II listing status, it would then be required to meet the applicable maintenance requirements set forth in PSE Rule 3.5(b).)[8]

Trading Environment and Transaction Reporting. The Exchange intends to allocate common stock listed under the SCOR program to a specialist for auction market trading. Any transactions in such securities would be reported on a real-time basis. Transactions in SCOR securities would be identified by a special suffix to the ticker symbol so that members, public investors and others can distinguish these securities from other securities traded on the Exchange. Finally, all of the Exchange's rules and equity surveillance procedures would be applicable to transactions in SCOR securities.

2. Statutory Basis

The Exchange states that the proposed rule change is consistent with section 6(b) of the Act, in general, and furthers the objectives in section 6(b)(5), in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of free and open market, and to protect investors and the public interest.

B. Self-Regulatory Organization's Statement on Burden on Competition

The proposed rule change will impose no burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others

Written comments on the proposed rule change were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the publication of this notice in the **Federal Register** or within such other period (i) as the Commission may designate up to 90

[5] Although the Exchange currently does not have corporate governance standards, the Exchange intends to submit corporate governance standards to the Commission for approval. The PSE states that it plans to amend File No. SR–PSE–92–41, concerning equity listing and maintenance standards, to include corporate governance requirements relating to conflicts of interest, quorums, shareholder approval policies, shareholder and annual meetings, solicitations of proxies and consents, and shareholder voting rights. Telephone conversation between Michael D. Pierson, Senior Attorney, PSE, and Elizabeth Cosgrove, Attorney, Commission, on May 4, 1993.

[6] See supra note 1. The PSE included in Amendment No. 1 Rule 3.5(h) which proposed maintenance requirements for SCOR securities that include, among other things, numerical criteria for: publicly held shares, market value, beneficial holders, and bid price.

[7] See File No. SR–PSE–92–41. On November 9, 1992, the PSE submitted to the Commission a proposed rule change to amend, among other things, Rule 3.2(c).

[8] Id. File No. SR–PSE–92–41 also would amend PSE Rule 3.5(b).

days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve the proposed rule change, or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the Commission's Public Reference Section, 450 Fifth Street, NW., Washington, DC 20549. Copies of such filing will also be available for inspection and copying at the principal office of the PSE. All submissions should refer to File No. SR–PSE–92–42 and should be submitted by July 22, 1993.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 93–15569 Filed 6–30–93; 8:45 am]

BILLING CODE 8010–01–M

SMALL BUSINESS ADMINISTRATION

[License No. 06/06–0173]

Dixie Business Investment Co.; License Surrender

Notice is hereby given that Dixie Business Investment Company ("DBIC"), a Louisiana corporation, has surrendered its license to operate as a small business investment company under the Small Business Investment Act of 1958, as amended ("the Act"). DBIC was licensed by the Small business Administration on August 21, 1974.

Under the authority vested by the Act and pursuant to the regulations promulgated thereunder, the surrender of the license was accepted on May 19, 1993, and accordingly, all rights, privileges, and franchises derived therefrom have been terminated.

(Catalog of Federal Domestic Assistance Program No. 59.011, Small Business Investment Companies)

Dated: June 23, 1993.

Wayne S. Foren,

Associate Administrator for Investment.

[FR Doc. 93–15517 Filed 6–30–93; 8:45 am]

BILLING CODE 8025–01–M

[License No. 07/07–0093]

First of Nebraska Investment Corporation; License Surrender

Notice is hereby given that First of Nebraska Investment Corporation, One First National Center, Suite 701, Omaha, Nebraska, 68102–1596 has surrendered its license to operate as a Small Business Investment Company under the Small Business Investment Act of 1958, as amended (the Act). First of Nebraska Investment Corporation was licensed by the Small Business Administration on November 25, 1988.

Under the authority vested by the Act and pursuant to the regulations promulgated thereunder, the surrender of the license was accepted on June 11, 1993 and accordingly, all rights, privileges and franchises derived therefrom have been terminated.

(Catalog of Federal Domestic Assistance Program No. 59.011, Small Business Investment Companies)

Dated: June 17, 1993.

Wayne S. Foren,

Associate Administrator for Investment.

[FR Doc. 93–15537 Filed 6–30–93; 8:45 am]

BILLING CODE 8025–01–M

[Application No. 99000084]

First Security Business Investment Corp.; Application for a Small Business Investment Company License

An application for a license to operate a small business investment company (SBIC) under the provisions of the Small Business Investment Act of 1958 (the Act), as amended (15 U.S.C. 661 *et seq.*), has been filed by First Security Business Investment Corporation (the Applicant), 79 South Main Street, suite 800, Salt Lake City, Utah 84111, with the Small Business Administration (SBA) pursuant to 13 CFR 107.102 (1993).

The proposed officers, directors and shareholders of the Applicant will be as follows:

Name	Title or position	Percent of ownership
First Security Corporation, 79 South Main Street, Salt Lake City, UT 84111	Shareholder	100.
Lynn Scott Nelson, 79 South Main Street, Salt Lake City, UT 84111	Chairman/Director	None.
Mark Douglas Howell, 79 South Main Street, Salt Lake City, UT 84111	President/Director	None.
Samuel Paul Jeppson, 79 South Main Street, Salt Lake City, UT 84111	Executive Vice Pres./Secretary/Director	None.
Louis Orin Alder, 79 South Main Street, Salt Lake City, UT 84111	Vice President/Gen. Manager	None.
Clark Rich Burbidge, 79 South Main Street, Salt Lake City, UT 84111	Vice President/Advisory Board Member	None.

The Applicant, a Utah Corporation, is expected to begin operations with $2,500,000 of private capital and will be a source of equity capital and long-term loan funds for qualified small business concerns. The Applicant intends to conduct its business activities in the states of Utah, Idaho, Wyoming, Nevada, Oregon, and New Mexico.

Matters involved in SBA's consideration of the Application include the general business reputation and character of the proposed owners and management, and the probability of successful operations of the existing company under their management including profitability and financial soundness in accordance with the Small Business Investment Act and the SBA Rules and Regulations.

Notice is further given that any person may, not later than 30 days from the date of publication of this Notice,

submit written comments on the proposed SBIC to the Associate Administrator for Investment, Small Business Administration, 409 Third Street, SW., Washington, DC 20416.

A copy of the Notice shall be published in a newspaper of general circulation in Salt Lake City, Utah.

(Catalog of Federal Domestic Assistance Program No. 59.011, Small Business Investment Companies)

Dated: June 21, 1993.

Wayne S. Foren,

Associate Administrator for Investment.

[FR Doc. 93–15516 Filed 6–30–93; 8:45am]

BILLING CODE 8025–01–M

DEPARTMENT OF STATE

[Public Notice 1825]

Shipping Coordinating Committee Subcommittee on Safety of Life at Sea and Associated Bodies et al.; Meeting

The Working Group on Stability and Load Lines and on Fishing Vessels Safety of the Subcommittee on Safety of Life at Sea (SOLAS) will conduct an open meeting on July 16, 1993, at 9 a.m. in Room 4315 at Coast Guard Headquarters, 2100 Second Street, SW., Washington, DC.

The purpose of this Working Group meeting is to discuss the preparations for the 38th Session of the International Maritime Organization (IMO) Subcommittee on Stability and Load Lines and on Fishing Vessels Safety (SLF), which is scheduled for February 14 to 18, 1994.

Items of discussion will include the following: subdivision and damage stability standards of passenger ships; harmonization of probabilistic damage stability provisions for all ship types; the new Code of Intact Stability; technical revisions to the 1966 Load Line Convention; stability aspects of open-top container ships; and probabilistic oil outflow.

Members of the public may attend this meeting up to the seating capacity of the room.

For further information on this SLF Working Group meeting, contact Mr. H.P. Cojeen or Mr. W.M. Hayden at (202) 267–2988; U.S. Coast Guard Headquarters (G–MTH), 2100 Second Street, SW., Washington, DC 20593–0001.

Dated: June 23, 1993.

Bruce Carter,

Executive Secretary, Shipping Coordinating Committee.

[FR Doc. 93–15543 Filed 6–30–93; 8:45 am]

BILLING CODE 4710–07–M

DEPARTMENT OF TRANSPORTATION

Aviation Proceedings; Agreements Filed During the Week Ended June 18, 1993

The following Agreements were filed with the Department of Transportation under the provisions of 49 U.S.C 412 and 414. Answers may be filed within 21 days of date of filing.

Docket Number: 48864.
Date filed: June 14, 1993.
Parties: Members of the International Air Transport Association.
Subject: Comp Telex Reso 024f—Sweden.
Proposed Effective Date: June 22, 1993

Docket Number: 48868.
Date filed: June 16, 1993.
Parties: Members of the International Air Transport Association.
Subject: PAC/Reso/378 dated May 26, 1993.
Expedited Resolutions r-1 to r-9.
Proposed Effective Date: Expedited July 1, 1993.

Docket Number: 48869.
Date filed: June 16, 1993.
Parties: Members of the International Air Transport Association.
Subject: TC3 Reso/P 0542 dated June 4, 1993.
Japan-Korea Expedited Reso 002d.
Proposed Effective Date: Expedited November 1, 1993.

Docket Number: 48870.
Date filed: June 16, 1993.
Parties: Members of the International Air Transport Association.
Subject:
TC3 Reso/P 0543 dated June 4, 1993.
Japan/Korea-South Asian subcontinent—r1–4.
TC3 Reso/P 0544 dated June 4, 1993.
Japan/Korea-Southeast Asia—r5–6.
TC3 Reso/P 0545 dated June 4, 1993.
Japan/Korea-Southeast Asia—r7–11.
TC3 Reso/P 0546 dated June 4, 1993.
Japan/Korea-Southwest Pacific—r12–14.
TC3 Reso/P 0547 dated June 4, 1993.
Japan/Korea-Southwest Pacific—r15–23.
Proposed Effective Date: Expedited July 1/August 1/October 16/November 1, 1993.

Docket Number: 48878.
Date filed: June 18, 1993.
Parties: Members of the International Air Transport Association.
Subject: TC12 Reso/C 0918 dated May 18, 1993.
Areawide (except USA/UST) Resos—r–1– 015aa & r–2–501.
Proposed Effective Date: October 1, 1993.

Docket Number: 48879.
Date filed: June 18, 1993.
Parties: Members of the International Air Transport Association.
Subject:
TC12 Reso/C 0920 dated May 18, 1993,
North Atlantic (except USA/UST) Resos.
Rates—TC12 Rates 0486 dated May 29, 1993, Minutes—TC12 Meet/C 0302 dated June 11, 1993, r–1–001aa, R–2–002, r–3–554a, r–4–584b, r–5–584cc, r–6–590.
Proposed Effective Date: October 1, 1993.

Docket Number: 48880.
Date filed: June 18, 1993.
Parties: Members of the International Air Transport Association.
Subject: TC23 Telex Mail Vote 635—Australia-Europe fares.
Proposed Effective Date: July 15, 1993

Phyllis T. Kaylor,

Chief, Documentary Services Division.

[FR Doc. 93–15473 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–62–P

Applications for Certificates of Public Convenience and Necessity and Foreign Air Carrier Permits Filed Under Subpart Q During the Week Ended June 18, 1993

The following Applications for Certificates of Public Convenience and Necessity and Foreign Air Carrier Permits were filed under subpart Q of the Department of Transportation's Procedural Regulations (See 14 CFR 302.1701 et. seq.). The due date for Answers, Conforming Applications, or Motions to Modify Scope are set forth below for each application. Following the Answer period DOT may process the application by expedited procedures. Such procedures may consist of the adoption of a show-cause order, a tentative order, or in appropriate cases a final order without further proceedings.

Docket Number: 48873.
Date filed: June 17, 1993.
Due Date for Answers, Conforming Applications, or Motion to Modify Scope: July 15, 1993.
Description: Application of Federal Express Corporation, pursuant to section 401 of the Act, and subpart Q of the Act, for a certificate of public convenience and necessity authorizing it to operate scheduled all-cargo foreign air transportation between the United States and Chile.

Docket Number: 48877.
Date filed: June 18, 1993.
Due Date for Answers, Conforming Applications, or Motion to Modify Scope: July 16, 1993.

Description: Application of Southeast Express Airlines, Inc., pursuant to section 401(d)(1) of the Act and subpart Q of the Regulations, requests a fitness determination and issuance of a Certificate of Public Convenience and Necessity to engage in scheduled interstate and overseas air transportation of persons, property and mail.

Docket Number: 48729.

Date filed: June 16, 1993.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: July 14, 1993.

Description: Amendment No. 1 and Supplement To Application of Nations Air Express, Inc. (formerly M.W. McDonald, Inc.) d/b/a Miami Air Charter (Nations Air), (1) to request issuance of a certificate of public convenience and necessity to engage in scheduled, instead of charter only, interstate and overseas air transportation, and (2) to reflect the change of name of the applicant from M.W. McDonald, Inc. d/b/a Miami Air Charter to Nations Air Express, Inc. d/b/a Miami Air Charter.

Docket Number: 44992.

Date filed: June 17, 1993.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: July 15, 1993.

Description: Application of Compania De Aviacion "Faucett", S.A., pursuant to section 402 of the Act and subpart Q of the Regulations, applies to amend its foreign air carrier permit to the extent necessary to authorize Faucett to provide once-per-week scheduled foreign air transportation of property and mail between the terminal point Lima, Peru, on the one hand, and the terminal point, Miami, Florida, on the other hand.

Phyllis T. Kaylor,

Chief, Documentary Services Division.

[FR Doc. 93–15474 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–62–P

Federal Aviation Administration

Improvements to the General Aviation Activity and Avionics Survey

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice.

SUMMARY: Notice is hereby given that the FAA intends to hold a public meeting to present and discuss proposed plans to improve the General Aviation Activity and Avionics Survey. The FAA plans to redesign this survey in response to suggestions for improvements in the amount and type of data collected, the frequency of collection, and actions to increase the statistical validity of the data.

DATES: Public meeting will be held at 2 p.m. on July 20, 1993, at the General Aviation Manufacturers Association, suite 801, 1400 K Street NW., Washington, DC 20005. The proposal will be sent to those who submitted written comments about the survey at least one week prior to the July 20 meeting. Any others wishing to receive the package should call or send a request to the address below.

ADDRESSES: Federal Aviation Administration, Office of Aviation Policy, Plans, and Management Analysis, (APO–110), 800 Independence Avenue SW., Washington, DC 20591.

FOR FURTHER INFORMATION CONTACT: Patricia Beardsley, FAA, Statistics and Forecast Branch, APO–110, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267–8032.

SUPPLEMENTARY INFORMATION: The FAA is evaluating the need for changes and improvements to the General Aviation Activity and Avionics Survey for survey data year 1993. FAA held a public meeting at 3 p.m. on May 3, 1993, at the General Aviation Manufacturers Association to provide information as to: the timetable for the 1993 survey, the FAA evaluation process, changes suggested to date, and preliminary criteria under consideration to evaluate change suggestions. All interested persons were invited to attend this meeting and submit written suggestions for changes and/or improvements to the survey design, the statistical analysis of the data, the frequency of collection, and any other related elements.

The FAA has evaluated these suggestions and has formulated a proposal for an improved survey. The purpose of the second meeting is to present and discuss the proposal with interested parties. Copies of the proposal will be sent to those who submitted written comments for their prior review. Other interested parties may request copies of this proposal from the FAA.

Penny L. Mefford,

Manager, Planning Analysis Division, (APO–100).

[FR Doc. 93–15560 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–13–M

Application To Impose and Use the Revenue From a Passenger Facility Charge (PFC); Tweed-New Haven Airport, CT

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Intent to rule on application.

SUMMARY: The FAA proposes to rule and invites public comment on the application to impose and use the revenue from a Passenger Facility Charge at Tweed-New Haven Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

DATES: Comments must be received on or before August 2, 1993.

ADDRESSES: Comments on this application may be mailed or delivered in triplicate to the FAA at the following address: Federal Aviation Administration, Airport Division, 12 New England Executive Park, Burlington, Massachusetts 01803.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Mr. Bruce H. Lawson, Airport Manager of the Tweed-New Haven Airport at the following address: Tweed-New Haven Airport, Terminal Building, 155 Burr Street, New Haven, Connecticut 06512.

Air carriers and foreign air carriers may submit copies of written comments previously provided to the City of New Haven under § 158.23 of part 158 of the Federal Aviation Regulations.

FOR FURTHER INFORMATION CONTACT: Priscilla A. Soldan, Airports Program Specialist, Federal Aviation Administration, Airports Division, 12 New England Executive Park, Burlington, Massachusetts 01803, (617) 238–7614. The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invites public comment on the application to impose and use the revenue from a Passenger Facility Charge (PFC) at Tweed-New Haven Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

On June 14, 1993, the FAA determined that the application to impose and use the revenue from a PFC submitted by the City of New Haven

was substantially complete within the requirements of § 158.25 of part 158 of the Federal Aviation Regulations. The FAA will approve or disapprove the application, in whole or in part, no later than September 11, 1993.

The following is a brief overview of the application.

Level of the proposed PFC: $3.00
Proposed charge effective date: January 1, 1994
Proposed charge expiration date: July 31, 1999
Total estimated PFC revenue: $2,490,450
Brief description of proposed project: Land Acquisition

Class or classes of air carriers which the public agency has requested not be required to collect PFCs: On Demand Air Taxi/Charter Operators (ATCO).

Any person may inspect the application in person at the FAA office listed above under FOR FURTHER INFORMATION CONTACT.

In addition, any person may, upon request, inspect the application, notice and other documents germane to the application in person at the Tweed-New Haven Airport, Terminal Building, 155 Burr Street, New Haven, Connecticut 06512.

Issued in Burlington, Massachusetts on June 22, 1993.

Vincent A. Scarano,

Manager, Airports Division, New England Region.

[FR Doc. 93–15561 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–13–M

Intent to Rule on Application to Impose and Use the Revenue From a Passenger Facility Charge (PFC) at Yuma County International Airport, Yuma, AZ

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of Intent to rule on application.

SUMMARY: The FAA proposes to rule and invites public comment on the application to impose and use the revenue from a PFC at Yuma International Airport, under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

DATES: Comments must be received on or before August 2, 1993

ADDRESSES: Comments on this application may be mailed or delivered in triplicate to the FAA at the following address:

Federal Aviation Administration, Airports Division, Standards Section, AWP—621, P.O. Box 92007, WWPC, Los Angeles, CA 90009.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Mr. E. M. Thurmond, A.A.E. Airport Manager of the Yuma International Airport at the following address:

Yuma County Airport Authority, 2191 East 32nd Street, Yuma, Arizona 85365.

Air carriers and foreign air carriers may submit copies of written comments previously provided to the Yuma County Airport Authority under § 158.23 of part 158.

FOR FURTHER INFORMATION CONTACT: Mr. John P. Milligan, Supervisor, Standards Section, AWP–621, Federal Aviation Administration, P.O. Box 92007, WWPC, Los Angeles, CA 90009, (310) 297–1029.

The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invite public comment on the application to impose and use the revenue from a PFC at Yuma International Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

On June 10, 1993, the FAA determined that the application to impose and use the revenue from a PFC submitted by Yuma County Airport Authority was substantially complete within the requirements of § 158.25 of part 158. The FAA will approve or disapprove the application, in whole or in part, no later than September 9, 1993. The following is a brief overview of the application.

Level of the proposed PFC: $3.00
Proposed charge effective date: September 1, 1993
Proposed charge expiration date: August 31, 2003
Total estimated PFC revenue: $1,678,064.00
Brief description of proposed project(s):

Expand Large Aircraft Parking Apron; Construct a New Access Road; Install PAPIs on Each End of Runway 8/26; Construct two Heliports; Install PAPI on Runway 35; Erosion Protection/Soil Stabilization; Land Acquisition; Terminal Study; Terminal Design; Construct new Terminal Building; Remove Administration building; Construct Terminal Apron.

Class or Classes of air carriers which the public agency has requested not be required to collect PFCs: None

Any person may inspect the application in person at the FAA office listed above under FOR FURTHER INFORMATION CONTACT and at the FAA regional Airports office located at:

Federal Aviation Administration, Western-Pacific Region, Airports Division, room 3024, Hawthorne, California 90261.

In addition, any person may, upon request, inspect the application, notice and other documents germane to the application in person at the Yuma County Airport Authority.

Issued in Hawthorne, California on June 16, 1993.

Ellsworth L. Chan,

Acting Manager, Airports Division, Western Pacific Region.

[FR Doc. 93–15563 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–13–P

Federal Highway Administration

Environmental Impact Statement; Little River, Miller, and Sevier Counties, AR, and Bowie County, TX

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a highway project in Little River, Miller, and Sevier Counties, Arkansas, and Bowie County, Texas.

FOR FURTHER INFORMATION CONTACT: Wendall L. Meyer, Environmental and Design Specialist, Federal Highway Administration, 3128 Federal Office Building, Little Rock, Arkansas, 72201–3298, Telephone: (501) 324–6430; or Reid Beckel, Consultant Coordinator, Chief Engineer, Arkansas State Highway and Transportation Department, P.O. Box 2261, Little Rock, Arkansas 72203, Telephone: (501) 569–2163.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Arkansas State Highway and Transportation Department, will prepare an environmental impact statement (EIS) on a proposal to construct a four-lane, divided, fully controlled access facility located on new alignment. The project will serve southwest Arkansas and northeast Texas, including Little River, Miller, and Sevier Counties, Arkansas, and Bowie County, Texas. The proposed project along U.S. 71, from north of DeQueen, Arkansas, to Texarkana, Arkansas-Texas, includes

several alternatives based on new location corridors and varying termini. The approximate length of the project is 50 miles.

The proposed improvements would improve the capacity of the existing route and increase regional mobility along a proposed ultimate route extending from Kansas City, Missouri, to Shreveport, Louisiana. This project is one of several projects identified as "high priority corridors" on the National Highway System that would provide a transportation corridor of national significance from Kansas City to Shreveport. This proposed improvement will draw new traffic through southwest Arkansas and serve as both a short-term and long-term economic stimulus, promoting development in this currently rural area. Major metropolitan areas lying along this "high priority corridor" include Kansas City, Kansas-Missouri; Joplin, Missouri; Fayetteville, Arkansas; Fort Smith, Arkansas; Texarkansas-Texas; and Shreveport, Louisiana.

The northern terminus of the proposed improvements will connect to existing tow-lane U.S. 71 just north of DeQueen, Arkansas. U.S. 71, north from this point, is scheduled for replacement with a similar four-lane improvement soon after this 50-mile section. The southern terminus of this project will connect with either U.S. 59 or Loop 245 at I–30 on either the Texas or Arkansas side of Texarkana. Loop 151/245 in Texas/Arkansas is currently being designed from I–30 around the south side of Texarkana. South of this project, a four-lane improvement from Texarkana, south to the Louisiana State Line, is under study for U.S. 71 in parallel with this project.

Alternatives to be considered are: (1) the "Do-Nothing" Alternative, where roads are constructed according to the regional plan with the exception of the proposed faciility; (2) the "Reconstruction" Alternative, where existing U.S. 71 and roads on the regional plan are upgraded to handle traffic forecast for the proposed facility, but with less than full control of access; and (3) the "New Location" Alternative, considering several different alignments and full control of access.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, state, and local agencies and to private organizations, including conservation groups and groups of individuals who have expressed interest in the project in the past, and to major Arkansas and northeast Texas newspapers. A series of public involvement sessions will be held in the areas to be affected. In addition, a formal public hearing will be held. Public notice will be given of the time and place of the public involvement sessions and the public hearing. The draft EIS will be available for public and agency review and comment prior to the public hearing. A formal scoping meeting will be held. Date and location for the scoping meeting will be determined as the project progresses.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation of Federal programs and activities apply to this program.)

Issued on: June 21, 1993.

Wendall L. Meyer,

Environmental and Design Specialist, FHWA, Little Rock, Arkansas.

[FR Doc. 93–15460 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–22–M

Environmental Impact Statement: Monroe County, PA

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for a proposed highway project in Monroe County.

FOR FURTHER INFORMATION CONTACT: Mr. Phil Ouellet, District Engineer, Federal Highway Administration, 228 Walnut Street, P.O. Box 1088, Harrisburg, Pennsylvania 17108–1088, Telephone: (717) 782–4422 or Robert J. Keller, Project Manager, Pennsylvania Department of Transportation, 2460 Parkwood Drive, Allentown, Pennsylvania, 18103, Telephone: (215) 791–6019.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Pennsylvania Department of Transportation (PennDOT), will prepare an Environmental Impact Statement for a section of U.S. Route 209 in Monroe County, Pennsylvania. The area of study for this project encompasses an area that is bounded on the north by the developed limits of the Marshalls Creek Urbanized area and on the south by I–80. The western boundary is approximately one mile west of the Business Route 209 and US Route 209 intersection. The eastern boundary for this study might extend to the Monroe/Pike County line. This boundary will be more precisely defined as this environmental study progresses. The primary purpose of this project is to relieve congestion along U.S. Route 209, Business Route 209, PA Route 402, and Creek Road in the vicinity of Marshalls Creek, and eliminate back-ups onto I–80 from U.S. Route 209. The improved access should be consistent with the deficiencies that exist in capacity, safety and access as described in the Comprehensive Transportation Needs Analysis Report and will support the Monroe County and Local Township Comprehensive Plans.

PennDOT has recently completed a Comprehensive Needs Analysis for this project. The results of this study were published in a report titled: "Marshalls Creek Access Study, Statement of Project Need", Dated March 31, 1992. This study concluded that improvements to the U.S. Route 209 in the Marshalls Creek vicinity are needed to:

- Relieve congestion along U.S. Route 209, Business Route 209, PA Route 402 and Creek Road in the vicinity of Marshalls Creek, and eliminate back-ups onto I–80 from U.S. Route 209.
- Improve air quality by reducing fuel consumption and vehicle emissions.
- Facilitate travel through Marshalls Creek for local and through traffic.
- Provide reduced response time for emergency vehicles.
- Improve the quality of life for local residents of Monroe County.
- Provide traffic capacity improvements which will be compatible with planned local development, State and Federal transportation plans, and which consider county and local government goals and objectives.

A wide range of alternatives will be developed and investigated during this study. The array of alternatives to be addressed include:

- Transportation Systems Management (TSM)
- Capital Intensive Transit Alternative
- Reconstruction on Existing Roadway
- New location/new alignments
- No-Build

PennDOT's goal in developing these alternatives will be to ensure that all reasonable project alternatives will be considered in the Preliminary Alternative Study, and that the selection of alternatives to study in detail will have considered all reasonable

transportation proposals. A preliminary Alternative Analysis will evaluate all suggested alternatives against the need and environmental and engineering constraints. A Plan of Study for the Environmental Impact Statement will be prepared and circulated to State and Federal agencies for those alternatives recommended as feasible by the Preliminary Alternative Analysis.

The second phase of the study process will consist of analyzing the alternatives selected for detailed study. These alternatives will be the basis for the detailed environmental studies and the Environmental Impact Statement. From this analysis a preferred alternative will be identified which best meets the need of the traffic demand, and satisfies the environmental, socioeconomic, and engineering evaluations and public comments. An active public participation program will be pursued during the project. At the beginning of the study, an advertisement will be placed in local newspapers and the Pennsylvania Bulletin informing the public and public agencies of the study and soliciting names of individuals, organizations and agencies interested in participating in the Study. A Citizens' Advisory Committee will meet regularly to provide liaison between the Commonwealth of Pennsylvania and local citizens, and participate in all aspects of the study.

Public Meetings will be held throughout the study to gather input to be used in the study and distribute information of the study. A Public Hearing will be held at the conclusion of the study to solicit comments from the public on alternatives presented. The Draft Environmental Impact Statement will be available for public and agency review and comment prior to the public hearing.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to PennDOT or the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research, Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernment consultation on Federal programs and activities apply to this program.)

Issued on: June 15, 1993.

George L. Hannon,

Assistant Division Administrator, Federal Highway Administration, Harrisburg, Pennsylvania.

[FR Doc. 93–15461 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–22–M

Federal Railroad Administration

Application for Approval of Discontinuance or Modification of a Railroad Signal System or Relief From the Requirements of 49 CFR Part 236

Pursuant to 49 CFR part 235 and 49 U.S.C. App. 26, the following railroads have petitioned the Federal Railroad Administration (FRA) seeking approval for the discontinuance or modification of the signal system or relief from the requirements of 49 CFR part 236 as detailed below.

Block Signal Application (BS–AP)—No. 3239

Applicants

Burlington Northern Railroad Company, Mr. William G. Peterson, Director, Control System Engineering, 9401 Indian Creek Parkway, P.O. Box 29136, Overland Park, Kansas 66201–9136

Chicago and Central Pacific Railroad, Mr. John A. Adair, Chief Engineer, 1006 East Fourth Street, P.O. Box 1800, Waterloo, Iowa 50704

Burlington Northern Railroad Company (BN) and Chicago and Central Pacific Railroad (CCP) jointly seek approval of the proposed signal modifications and rearrangement, between Portage, milepost 172.30, and East Dubuque, Illinois, milepost 185.5, on the LaCrosse Division, Aurora Subdivision, associated with the installation of electronic coded track circuits and conversion to centralized traffic control operation.

The reason given for the proposed changes is BN's recent purchase of portions of the trackage from the CCP with the acquisition of all signals and controls, the interlocking equipment is obsolete and in need of replacement, and to conform with the BN standards for installation of electronic coded track circuits.

BS–AP—No. 3240

Applicant

CSX Transportation, Mr. W.J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202

CSX Transportation seeks approval of the proposed discontinuance of the automatic block signal system on Track No. 10, between milepost CLS63.7 and milepost CLS64.6, near Peach Creek, West Virginia, Huntington Division, Logan Subdivision, consisting of the discontinuance and removal of two dwarf signals.

The reason given for the proposed changes is that the automatic block signal system is no longer needed for present day operation.

BS–AP—No. 3241

Applicant

CSX Transportation, Mr. W.J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202

CSX Transportation seeks approval of the proposed modification of the signal system at "W&A 1096," milepost SG577.3, in Atlanta, Georgia, Atlanta Division, Abbeville Subdivision, consisting of the discontinuance and removal of one controlled signal.

The reason given for the proposed changes is that the controlled signal is no longer needed for present day operation.

BS–AP—No. 3242

Applicant

Norfolk Southern Corporation, Mr. J.W. Smith, Chief Engineer—C&S, Communication and Signal Department, 99 Spring Street, SW., Atlanta, Georgia 30303

The Norfolk Southern Corporation seeks approval of the proposed modification of "Bannon" Interlocking, milepost N–698.5, near Columbus, Ohio, Lake Division, Columbus District, Northern Region, consisting of the conversion of power-operated switch 279 to hand operation and the relocation of controlled signals 278L and 278R to milepost N–698.7.

The reason given for the proposed change is to improve operations and increase efficiency.

BS–AP—No. 3243

Applicant

Three Rivers Railway Company, Mr. John M. Gibson, Jr., President, Suite 780 Commerce Court, Four Station Square, Pittsburgh, Pennsylvania 15219–1199

The Three Rivers Railway Company seeks approval of the proposed discontinuance and removal of the traffic control and automatic block signal systems on the single and double main tracks, between McKeesport, Pennsylvania, milepost 15.3M–Y and Newell, Pennsylvania, milepost 51.5M,

on the Mon Subdivision, a distance of approximately 36 miles.

The reason given for the proposed changes is that the traffic density does not warrant the retention of the signal system.

BS–AP—No. 3244

Applicant

CSX Transportation, Mr. W. J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202.

CSX Transportation seeks approval of the proposed modification of the signal system on the single main track between milepost CLS3.6, near Barboursville, West Virginia and milepost CLS33.7, near Ranger, West Virginia, Huntington Division, Logan Subdivision; consisting of the relocation of six automatic signals, numbers 78, 79, 144, 149, 280, and 281.

The reason given for the proposed changes is the installation of electronic coded track circuits associated with pole line elimination.

BS–AP—No. 3245

Applicant

New Orleans Public Belt Railroad, Mr. A. C. Marinello, Jr., Manager, Engineering and Maintenance, P. O. Box 51658, New Orleans, Louisiana 70151–1658

The New Orleans Public Belt Railroad seeks approval of the proposed discontinuance and removal of the automatic block signal system on the two main tracks between Lambert Junction, milepost J0.2 and Louisiana Avenue, milepost 5.5, near New Orleans, Louisiana; consisting of the discontinuance and removal of 19 block signals (55, 54, 51, 50, 45, 44, 41, 40, 33, 30, 23, 22, 15, 14, 13, 12, 5, 4, and 2).

The reason given for the proposed changes is that traffic patterns have changed, with traffic significantly reduced and reduction to a single main line operation with no longer having tenant lines between milepost 5.5 and milepost 3.5.

BS–AP—No. 3246

Applicant

Norfolk Southern Corporation, Mr. J. W. Smith, Chief Engineer—C&S, Communication and Signal Department, 99 Spring Street, SW., Atlanta, Georgia 30303

The Norfolk Southern Corporation seeks approval of the proposed modification of the traffic control system, near Williamson, West Virginia, milepost 468.8, Pocahontas District, Pocahontas Division, Eastern Region; consisting of the discontinuance and removal of signal W–4.

The reason given for the proposed change is to improve operations and increase efficiency.

BS–AP–No. 3247

Applicant:

Burlington Northern Railroad Company, Mr. William. G. Peterson, Director Control System Engineering, 9401 Indian Creek Parkway, P. O. Box 29136, Overland Park, Kansas 66201–9136

The Burlington Northern Railroad Company seeks approval of the proposed discontinuance and removal of the manual interlocking and signals on the single main track between Whitmarsh, Washington, milepost 6.4 and Whitney, Washington, milepost 9.6, on the Cascade Division, Bellingham Subdivision, associated with the installation of one mile draw span signs, stop signs, and split point derails.

The reason given for the proposed changes is that the interlocking equipment is obsolete, and the cost to rehabilitate the interlocking is not warranted by its limited use.

Rules Standards & Instructions Application (RS&I-AP) No. 1088

Applicant:

The Atchison Topeka and Santa Fe Railway Company, Mr. M. W. Franke, Vice President-Maintenance, 1700 East Golf Road, Schaumburg, Illinois 60173–5860

The Atchison Topeka and Santa Fe Railway Company (ATSF) seeks relief from the requirements of 49 CFR part 236, Section 236.110 of the Rules, Standard and Instructions to the extent that ATSF be permitted to file electronic reports of test results instead of recording the test results on preprinted or computerized paper forms signed by the employee making the test.

Applicant's justification for relief: Implementation of an E-Mail reporting system would both reduce costs and provide an immediate increase in efficiency.

Any interested party desiring to protest the granting of an application shall set forth specifically the grounds upon which the protest is made, and contain a concise statement of the interest of the protestant in the proceeding. The original and two copies of the protest shall be filed with the Associate Administrator for Safety, FRA, 400 Seventh Street, SW., Washington, DC 20590 within 45 calendar days of the date of issuance of this notice. Additionally, one copy of the protest shall be furnished to the applicant at the address listed above.

FRA expects to be able to determine these matters without oral hearing. However, if a specific request for an oral hearing is accompanied by a showing that the party is unable to adequately present his or her position by written statements, an application may be set for public hearing.

Issued in Washington, DC on June 25, 1993.

Phil Olekszyk

Deputy Associate Administrator for Safety

[FR Doc. 93–15564 Filed 6–30–93; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF THE TREASURY

Public Information Collection Requirements Submitted to OMB for Review

June 25, 1993.

The Department of Treasury has submitted the following public information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1980, Public Law 96–511. Copies of the submission(s) may be obtained by calling the Treasury Bureau Clearance Officer listed. Comments regarding this information collection should be addressed to the OMB reviewer listed and to the Treasury Department Clearance Officer, Department of the Treasury, Room 3171 Treasury Annex, 1500 Pennsylvania Avenue, NW., Washington, DC 20220.

Internal Revenue Service

OMB Number: 1545–0074

Form Number: IRS Form 1040 and Schedules A, B, C, C–EZ, D, E, EIC, F, R, and SE

Type of Review: Revision

Title: U.S. Individual Income Tax Return

Description: This form is used by individuals to report their income tax and compute their correct tax liability. The data is used to verify that the items reported on the form are correct and are also for general statistical use.

Respondents: Individuals or households

Estimated Number of Respondents/Recordkeepers: 68,786,268

Estimated Burden Hours Per Respondent/Recordkeeper:

Form	Recordkeeping	Learning about the law or the form	Preparing the form	Copying, assembling, and sending the form to the IRS
1040	3 hr., 8 min	2 hr., 45 min	3 hr., 45 min	53 min.
Sch. A	2 hr., 32 min	24 min	1 hr., 9 min	27 min.
Sch. B	33 min	8 min	17 min	20 min.
Sch. C	6 hr., 26 min	1 hr., 10 min	2 hr., 4 min	35 min.
Sch. C–EZ	46 min	4 min	17 min	20 min.
Sch. D	51 min	43 min	1 hr., 13 min	48 min.
Sch. E	2 hr., 52 min	1 hr., 6 min	1 hr., 16 min	35 min.
Sch. EIC	40 min	19 min	49 min	55 min.
Sch. F:				
Cash method	4 hr., 2 min	34 min	1 hr., 14 min	20 min.
Accrual method	4 hr., 22 min	25 min	1 hr., 19 min	20 min.
Sch. R	20 min	15 min	22 min	35 min.
Sch. SE:				
Short	20 min	13 min	10 min	14 min.
Long	26 min	22 min	38 min	20 min.

Frequency of Response: Annually
Estimated Total Reporting/ Recordkeeping Burden: 1,117,862,200 hours
OMB Number: 1545–0099
Form Number: IRS Form 1065, Schedule D (Form 1065) and Schedule K–1 (Form 1065)
Type of Review: Revision
Title: U.S. Partnership Return of Income (Form 1065) Capital Gains and Losses (Schedule D) Partner's Share of Income, Credits, Deductions, etc. (Schedule K–1)
Description: Internal Revenue Code (IRC) section 6031 requires partnerships to file returns that show gross income items, allowable deductions, partners' names, addresses, and distribution shares, and other information. This information is used to verify correct reporting of partnership items and for general statistics.
Respondents: Individuals or households, farms, businesses or other for-profit, small businesses or organizations
Estimated Number of Respondents/ Recordkeepers: 1,610,000
Estimated Burden Hours Per Respondent/Recordkeeper:

	Form 1065	Schedule D (Form 1065)	Schedule K–1 (Form 1065)
Recordkeeping	38 hr., 53 min	5 hr., 30 min	24 hr., 38 min.
Learing about the law or the form	17 hr., 35 min	1 hr., 12 min	8 hr., 9 min.
Preparing the form	30 hr., 19 min	1 hr., 20 min	8 hr., 55 min.
Copying, assembling, and sending the form to the IRS	3 hr., 13 min.		

Frequency of Response: Annually
Estimated Total Reporting/Recording Burden: 835,843,952 hours
OMB Number: 1545–0193
Form Number: IRS Form 4972
Type of Review: Revision
Title: Tax on Lump-Sum Distributions
Description: Internal Revenue Code (IRC) section 402(e) allows taxpayers to compute a separate tax on lump-sum distribution from a qualified retirement plan. Form 4972 is used to correctly figure that tax. The data is used to verify the correctness of the separate tax. Form 4972 is also used to make the special 20% capital gain election attributable to pre-1974 participation from the lump-sum distribution.
Respondents: Individuals or households
Estimated Number of Respondents/ Recordkeepers: 140,000
Estimated Burden Hours Per Respondent/Recordkeeper:
Recordkeeping: 33 minutes
Learning about the law or the form: 27 minutes
Preparing the form: 1 hour, 46 minutes
Copying, assembling, and sending the form to the IRS 35 minutes
Frequency of Response: Annually
Estimated Total Reporting/Recording Burden: 467,600 hours
OMB Number: 1545–0988
Form Number: IRS Form 8069 and Schedule A (Form 8609)
Type of Review: Revision
Title: Low-Income Housing Credit Allocation Certification (8069) Annual Statement (Schedule A)
Description: Owners of residential low-income rental buildings may claim a low-income housing credit for each qualified building over a 10-year credit period. Form 8609 is used to get a credit allocation from the housing credit agency. The form, along with Schedule A, is used by the owners to certify necessary information required by the law.
Respondents: Individuals or households, State or local governments, Businesses or other for-profit, Non-profit institutions, Small businesses or organizations
Estimated Number of Respondents/ Recordkeepers: 240,000
Estimated Burden Hours Per Respondent/Recordkeeper:

	Form 8069	Schedule A
Record-keeping.	8 hr., 22 min	6 hr., 41 min.
Learing about the law or the form.	2 hr., 35 min	1 hr., 29 min.
Preparing the form to the IRS.	2 hr., 50 min	1 hr., 38 min.

Frequency of Response: Annually
Estimated Total Reporting/Recording Burden: 2,663,400 hours
Clearance Officer: Garrick Shear (202) 622–3869, Internal Revenue Service, room 5571, 1111 Constitution Avenue, NW., Washington, DC 20224.
OMB Reviewer: Milo Sunderhauf (202) 395–6880, Office of Management and Budget, room 3001, New Executive

Office Building, Washington, DC 20503.

Lois K. Holland,

Departmental Reports Management Officer.

[FR Doc. 93-15551 Filed 6-30-93; 8:45 am]

BILLING CODE 4830-01-M

Customs Service

[T.D. 93-46]

Accreditation of United Chemical Testing, Inc. To Perform Certain Laboratory Analysis for Customs Purposes

AGENCY: Customs Service, Department of the Treasury.

ACTION: Notice of accreditation of United Chemical Testing, Inc. to perform certain laboratory analysis for Customs purposes.

SUMMARY: United Chemical Testing, Inc. of Baytown, Texas has been given Customs accreditation under § 151.13 of the Customs Regulations (19 CFR 151.13) to perform the following laboratory analyses: API Gravity, Sediment and Water, Water by Distillation, Sediment by Extraction, Reid Vapor Pressure, Saybolt Universal Viscosity, Percent by Weight Sulfur, Percent by Weight Lead, Isomer Composition, Distillation Characteristics, Identity and Composition by Weight of Benzene, Toluene and Xylene.

Therefore, in accordance with § 151.13(f) of the Customs Regulations, United Chemical Testing, Inc., 7503 Bayway Drive, Baytown, Texas 77520 is accredited to perform the laboratory analyses named above and report the results to all Customs districts.

EFFECTIVE DATE: June 21, 1993.

FOR FURTHER INFORMATION CONTACT: Ira S. Reese, Special Assistant For Commercial and Tariff Affairs, Office of Laboratories and Scientific Services, U.S. Customs Service, 1301 Constitution Ave. NW, Washington, D.C. 20229 (202-927-1060).

Dated: June 25, 1993.

John B. O'Loughlin,

Director, Office of Laboratories and Scientific Services.

[FR Doc. 93-15579 Filed 6-30-93; 8:45 am]

BILLING CODE 4820-02-P

Procedures If Generalized System of Preferences Program Expires

AGENCY: U.S. Customs Service, Department of the Treasury.

ACTION: General notice.

SUMMARY: The Generalized System of Preferences (GSP) is a preferential trade program that allows the products of many developing countries to enter the United States duty-free. The GSP is currently scheduled to expire at midnight on July 4, 1993, unless extended by law. This document is notice to importers that claims for duty-free treatment under GSP may not be made for merchandise entered or withdrawn from a warehouse on or after July 5, 1993, if the program is not extended before that date. The document also sets forth Customs mechanism to facilitate refunds, if GSP is renewed retroactively.

DATES: The plan set forth in this document will become effective as of July 5, 1993, if Congress does not extend the GSP program before that date.

FOR FURTHER INFORMATION CONTACT: For general operational aspects: Lisa Crosby, Office of Trade Operations, 202-927-0163; For specific questions relating to the Automated Commercial Systems: Iry Fisher, Office of Automated Commercial System, 202-927-1220.

SUPPLEMENTARY INFORMATION:

Background

Title V of the Trade Act of 1974, as amended (19 U.S.C. 2461-2465) (the Act) authorizes the President to establish a Generalized System of Preferences (GSP) to provide duty-free treatment for eligible articles imported directly from designated beneficiary countries. Beneficiary developing countries and articles eligible for duty-free treatment are designated by the President by Executive Order in accordance with sections 502(a)(1) and 503(a) of the Trade Act of 1974, as amended (19 U.S.C. 2462(a)(1), 2463(a)). Pursuant to 19 U.S.C. 2465, no duty-free treatment under GSP shall remain in effect after July 4, 1993.

Congress is currently considering whether to extend the GSP program. A provision to extend the GSP through September 30, 1994, was included in the 1993 Budget Reconciliation Act. This act was recently approved by the House of Representatives and is awaiting action by the Senate. The provision to extend GSP that was passed by the House would permit the refund of duties paid while the program was lapsed, upon the request of the importer.

If Congress does not pass legislation renewing GSP before midnight, July 4, 1993, no claims for duty-free treatment under the program may be made after that time. If Congress passes legislation after that date renewing the GSP retroactively, Customs will need to reliquidate numerous entries to make refunds.

Recognizing the impact that retroactive renewal and numerous reliquidations would have on both importers and Customs, Customs Headquarters consulted with regional offices, importers and Customs brokers to develop a mechanism to facilitate refunds, should GSP be renewed retroactively. Set forth below is Customs plan that will be implemented July 5, 1993, if the GSP has not been extended.

Claims Duties Must Be Deposited

No claims for duty-free treatment under the GSP may be made for merchandise entered or withdrawn from warehouse or withdrawn from warehouse on or after July 5, 1993. Duties at the most-favored-nation rate must be deposited, or a claim may be made under another preferential program for which the merchandise qualifies (e.g., Andean Trade Preference Act, Caribbean Basin Initiative, U.S.-Israel Free Trade Area Agreement).

While duty must be paid, all filers, other than those using the Automated Broker Interface (ABI) who file paperless entry summaries, may continue to file using the Special Program Indicator (SPI) for the GSP (the letter "A") as a prefix to the tariff number for all entries that would have qualified for GSP if GSP were still in effect. Customs Automated Commercial System (ACS) will be reprogrammed to accept the SPI "A" with the payment of duty.

Filers using the ABI may reprogram their software so that the SPI "A" can still be used as a prefix to the tariff number. While reprogramming is strictly voluntary, continued use of the SPI "A" has some benefits.

The benefits of continued use of the SPI "A" include that, if the filer also flags the entry summary with a blue cover sheet as discussed below, the filer will not have to write a letter to Customs requesting a refund if GSP is renewed retroactively. In other words, after July 4, 1993, the SPI "A", along with the blue cover sheet discussed below, will constitute an importer's request for a refund of duties paid for GSP line items, should the GSP be renewed retroactively. Other benefits are that ACS will perform its usual edits on the information transmitted by the filer, thereby ensuring GSP claims are for acceptable country/tariff combinations and the need for numerous statistical corrections will be eliminated.

Details on the programming changes required have been issued as an administrative message to all ABI filers.

Filers who do not wish to reprogram have two options. They can continue to use ABI, but not use the prefix "A" or they can file summaries off-line (non-ABI).

Filers continuing to use the SPI "A" may use it as they do now (e.g., for warehouse entries, for formal consumption entries, for both ABI and non-ABI entries).

A claim for a preferential rate under another trade program, however, will preclude use of the SPI "A" to request a refund. Thus, an importer entering merchandise using a reduced rate under the U.S. Israel Free Trade Area Agreement will be precluded from using the "A" to request that the U.S.-Israel FTA claim be converted to a GSP claim, should the GSP be renewed retroactively. Importers, however, may make such a request in writing if and when the GSP is renewed retroactively.

Customs stresses that to continue using the SPI "A", filers, as well as filing paper entry summaries, must flag the summary with a blue cover sheet indicating that the importer is requesting any GSP refund authorized by law. This blue cover sheet aids tracking of these summaries and serves as an audit trail to explain a later refund of duties. Suggested wording for the cover sheet is:

TO: U.S. Customs Service, _____District

The attached entry summary covers merchandise which meets the requirements of the Generalized System of Preferences (GSP). Please refund duties paid for line items identified with the prefix "A" if such refund is authorized by the 1993 Budget Reconciliation Act or other provision of law.

Customs emphasizes that those wishing to file paperless entry summaries may not use the SPI "A" and must request a refund in writing if and when the GSP is renewed retroactively.

Statistics

For statistical purposes, ACS will internally convert any "A" transmitted via ABI after July 4 into a "Q"; for non-ABI summaries, the Bureau of the Census will convert the "A" to a "Q". If the GSP is renewed retroactively, Census will convert all "Q" statistics into "A" statistics, thereby ensuring that next year's competitive need limitations under the GSP are accurate. This will also vastly reduce the number of statistical corrections that must be done by import specialists.

Acceptance of Entry Summaries

Upon acceptance, entry summaries will be reviewed according to existing summary selectivity.

Liquidated summaries will be rebatched using a special function that will flag the batch at the entry level with the letter "G" for "GSP" (e.g., 930706-I17E-001-G01).

If the entry summary cannot be liquidated because of some outstanding issue (e.g., antidumping duties), the summary will be placed in the appropriate holding code, according to the standard operating procedure.

If merchandise for which a GSP claim has been made is ineligible for GSP treatment, the import specialist shall issue a CF 29 ("Notice of Action") to the importer indicating that the claim has been denied. Because duties will have been deposited, it will be unnecessary to liquidate the summary with a change —the CF 29 will be the importer's only notification that the GSP claim has been denied. As always, importers may protest denied GSP claims under 19 U.S.C. 1514 and 19 CFR part 174.

Informal Entries

Informal entries filed via ABI on a Customs Form 7501 will be rebatched using the DOCG function and stored with the GSP duty-paid summaries. Separate procedures will be used for other kinds of informal entries.

Refunds

If the GSP is renewed retroactively, Customs Headquarters will issue instructions to reliquidate summaries in the GSP duty-paid batches with a refund for the GSP line items, and to provide administrative refunds for summaries that cannot be liquidated. Field locations shall not issue GSP refunds until instructed to do so by Customs Headquarters.

If a filer submitted an entry summary with both the SPI "A" and the blue cover sheet, no further action would need to be taken by the filer to request a refund; filing with the SPI "A" and the blue cover sheet constitutes a valid claim for a refund.

Refunds for summaries filed without the SPI "A" and the blue cover sheet must be requested in writing. Instructions on how to request a refund in writing will be issued if and when the GSP is renewed retroactively.

The GSP provision as currently written requires that importers request refunds within 180 days of the date of enactment of the Act. Customs will also process claims according to the requirements of 19 U.S.C. 1520(c). Of course, entry summaries filed using the SPI "A" and the cover sheet will receive refunds without further action, since the SPI and cover sheet constitute the importer's advance request for a refund.

Dated: June 28, 1993.

Samuel H. Banks,

Assistant Commissioner, Commercial Operations.

[FR Doc. 93-15558 Filed 6-30-93; 8:45 am]

BILLING CODE 4820-02-P

UNITED STATES INFORMATION AGENCY

U.S.-NIS Summer Language Teacher Exchange Program

AGENCY: United States Information Agency.

ACTION: Notice—request for proposals.

SUMMARY: The United States Information Agency (USIA) invites applications from U.S.-based international exchange organizations, accredited U.S. institutions, or consortia of accredited U.S. institutions, for the development of a summer language teacher exchange program between the United States and selected countries in the Newly Independent States (NIS). The goal of this program is to improve the teaching of American English and culture in the NIS and the teaching of the languages and cultures of the countries within the NIS to the citizens of the U.S. The purpose of the program is to conduct an intensive summer language enhancement program through academic coursework, seminars, practica, and/or panel discussions, for up to 40 participants in each direction. Preference will be given to proposals that exchange participants, to the extent feasible, from all eligible countries in the NIS. These exchanges are subject to the availability of funding for Fiscal Year 1994.

DATES: Deadline for proposals: All copies must be received at the U.S. Information Agency by 5 p.m. Washington, DC time on Wednesday, September 8, 1993. Faxed documents will not be accepted, nor will documents postmarked on September 8, 1993 but received at a later date. It is the responsibility of each grant applicant to ensure that its proposal is received by the above deadline.

Duration: The exchange of participants for the U.S.-NIS Summer Language Teacher Exchange Program should be a minimum of five weeks in duration, but should not exceed a maximum of fourteen weeks. It is expected that the program will take place during the summer of 1994.

ADDRESSES: The original and 14 copies of the completed application, including required forms, should be submitted to: U.S. Information Agency, Reference: U.S.-NIS Summer, Language Teacher

Exchange Program, Grants Management Division, E/XE, room 336, 301 4th Street, S.W., Washington, DC 20547.

FOR FURTHER INFORMATION CONTACT: Interested U.S. organizations should write or call: Mary Ann Garlic or Ted Kniker, U.S. Information Agency, 301 4th Street, S.W., European Branch, Academic Exchanges Division, E/AEE room 208, Washington, DC 20547; telephone (202) 619–5341, to request detailed application packets, which include award criteria additional to this announcement, all necessary forms, and guidelines for preparing proposals, including specific budget preparation information.

SUPPLEMENTARY INFORMATION: Overall authority for this program is contained in the Mutual Educational and Cultural Exchange Act of 1961, as amended, Public Law 87–256 (Fulbright-Hays Act). The purpose of the ACt is "to enable the Government of the United States to increase mutual understanding between the people of the United States and people of other countries by means of educational and cultural exchange; to strengthen the ties which unite us with other nations by demonstrating the educational and cultural interests, developments, and achievements of the people of the United States and other nations and thus to assist in the development of friendly, sympathetic, and peaceful relations between the United States and other countries of the world." Pursuant to the Bureau of Educational and Cultural Affairs authorizing legislation, programs must maintain a non-political character and should be balanced and representative of the diversity of American political, social and cultural life. Programs shall also "maintain their scholarly integrity and shall meet the highest standards of academic excellence or artistic achievement."

Program Requirements

Support is offered for programs which bring citizens from the NIS who are English language educators to the U.S., and U.S. citizens who are language educators in one or more of the languages and cultures of the following eligible countries: Armenia, Azerbaijan*, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Russia, Ukraine and Uzbekistan, for advanced language instruction. Grantees should make an effort to recruit from all eligible countries as feasible.

Programs must be two-way. While it is desirable to place American participants in as many countries as possible, strict reciprocity of placements is not required. Participants are expected to be placed as a group or in subgroups at one or more locations. The study program should focus on U.S. and NIS languages such as Slavic, Uralic, Altaic, Russian and other related languages.

The goal of this program is to improve the teaching of American English and culture in the NIS and the teaching of the various languages and cultures of the countries of the NIS to Americans. The type of language instruction should be described in detail in the proposal. The course work should enhance the knowledge of the NIS and U.S. participants. Course offered may include, but are not limited to, language teaching methodologies, grammar, phonetics, and conversation. The program should provide for an area studies component, details of which should be provided by the applicant in the proposal. The program should also provide professional development to the American and NIS language instructors.

It is expected that when each participant returns to his or her home country he or she will share his or her newly gained knowledge of the language and culture with students, colleagues, and future language teachers. Programs for study in fields other than language studies will not be considered. Programs in the U.S. are expected to be conducted in English. Programs in the NIS are expected to be conducted in the native or instructional language of the host country. Participants are expected to study and travel as a group or in subgroups.

*Please Note: Programs with Azerbaijan are subject to restrictions of Section 907 of the Freedom Support Act: Employees of the Government of Azerbaijan or any of its instrumentalities are excluded from participation and no U.S. participant overseas may work for the Government of Azerbaijan or any of its instrumentalities.

In addition, the Government of Azerbaijan and/or its instrumentalities will have no control in the actual selection of participants.

Participant Selection

The proposal must include detailed descriptions of the selection processes for participants, both foreign and American. Participants must be citizens of the U.S. or one of the countries of the NIS and must be high school teachers or college faculty currently involved in the instruction of the language to be studied. U.S. and foreign participants must be recruited nationally. Priority will be given to projects that demonstrate the widest geographic representation of participant recruitment. A goal for this program is to select teachers and faculty from geographically diverse areas in the home country. Preference will be given to projects in which participants are recruited through open, merit-based competition.

Guidelines

Language qualifications: Participants should have sufficient fluency in the native or instructional language of the host country to be able to pursue university level study and be able to converse with citizens of the country without the aid of interpreters.

Institutional Commitment: Proposals must include documentation of institutional support for the proposed program in the form of signed letters of endorsement from the U.S. and foreign partner institutions presidents, chancellors, or directors, or in the form of a signed agreement by the same persons. Letters of endorsement must describe each institution's or organization's commitment and make specific reference to the proposed program and each institution's activities in support of that program. Documentation of support from governmental ministries or academies will be accepted when appropriate, replacing individual documentation from each foreign educational institution involved.

Applicants must submit this documentation as part of the completed application. Applying institutions are expected to make their own arrangements with the appropriate foreign institutions.

Orientation Programs

Participants should be provided with a substantive and comprehensive orientation to the country of their visit, and proposals should describe these orientation programs, including costs, in detail.

General Requirements

Programs must comply with J visa regulations and should reference this adherence in the proposal narrative. Proposals must comply with reporting and witholding regulations for federal, state and local taxes as applicable. Applicants should demonstrate tax regulation adherence in the proposal narrative and budget notes.

Proposal Narrative

The proposal narrative describing the program must conform to the aforementioned Guidelines dated April 1993 and must include any subgrants to be issued. The narrative must also describe in detail the abilities of the

participating organizations to adapt to the changing exchange environments in the countries eligible for participation in this program. The proposal should also detail the program activities in each country, including the courses offered, who will teach the courses, what the courses will cover, and how the courses relate to the enhancement of participants' language or teaching skills.

Proposed Budget

One or two project awards to U.S. organizations will be made in a wide range of amounts, but combined awards will not exceed $240,000, which includes program and administrative costs.

The Agency reserves the right to reduce, revise or increase proposal budgets in accordance with the needs of the program. For organizations with less than four years of experience in international exchange activities, grants will be limited to a maximum of $60,000, and proposed budgets should not exceed this amount.

All organizations must submit a comprehensive line item budget, the details and format of which are contained in the application packet. The budget should list all sources of support for the program in fiscal year 1994, including both cash and in-kind contributions.

Allowable costs

Grant-funded items of expenditure may include, but are not limited to, the following categories:

Program Costs

—International Travel (via American flag carrier);
—Domestic travel;
—Excursionary travel and lodging for cultural enrichment (not to exceed $200.00 per participant);
—Maintenance and per diem;
—Academic program costs (e.g. tuition, book allowance);
—Travel and partial maintenance costs for supervisors or resident directors, for no more than one program supervisor per twenty participants;
—Orientation costs (speaker honoraria are not to exceed $150 per day per speaker);
—Cultural enrichment expenses (admissions, tickets, etc.; limited to $150 per participant);
—Medical insurance for participants (participants are covered by the Agency's self-insurance policy when USIA is funding over fifty percent of the total cost of the project); and
—Taxes and visa fees.

Administrative costs—Not to exceed 20% of the requested budget.

—Salaries and benefits;
—Communications (e.g. fax, telephone, postage);
—Office Supplies;
—Administration of tax withholding and reporting as required by Federal, State and local authorities and in accordance with relevant tax treaties;
—Other Direct Costs; and
—Indirect Costs.

Please Note: It is required that requested administrative funds, including indirect costs and administrative expenses for orientation, not exceed 20 percent of the total amount requested from USIA; administrative expenses should be cost-shared.

Review Process

USIA will acknowledge receipt of all proposals and will review them for technical eligibility.

Ineligible Proposals: Proposals may be deemed ineligible if they do not fully adhere to the guidelines established herein and in the Application Package, including the Guidelines dated April, 1993.

Eligible Proposals: Eligible proposals will be forwarded to panels of USIA officers for advisory review. All eligible proposals will also be reviewed by the appropriate geographic area office, and the budget and contracts offices. Funding decisions are at the discretion of the Associated Director for Educational and Cultural affairs. Final technical authority for grant awards resides with USIA's contracting officer.

d. Multiplier effect/impact—the impact of the exchange activity on the wider community and on the development of continuing ties, as well as the contribution of the proposed activity in promoting mutual understanding.

e. Value of U.S.-partner country relations—the assessment by USIA's geographic area office of the need, potential impact, and significance of the project with the partner country.

f. Cost-effectiveness—greatest return on each grant dollar. A key measure of cost-effectiveness is the unit cost to the Agency. This is the total request of USIA monies divided by the number of exchanges (people moved). The Agency also reviews the ratio of cost-sharing exhibited. Cost-sharing through other financial support as well as institutional direct and in-kind funding contributions is strongly encouraged.

Review Criteria

Technically eligible applications will be competitively reviewed according to the following criteria:

a. Quality of program plan, including academic rigor, thorough conception of project, demonstration of meeting student needs, contributions to understanding the partner country, proposed follow-up, and qualifications of program staff and participants.

b. Feasibility of the program plan and the capacity of the organization to conduct the exchange. Proposals should clearly demonstrate how the institution will meet the program objectives and plan.

c. Track record—relevant Agency and outside assessments of the organization's experience with international exchanges; for organizations that have not worked with USIA before, the demonstrated potential to achieve program goals will be evaluated.

g. Diversity and pluralism—preference will be given to proposals that demonstrate efforts to provide for the participation of teachers who will impact students from diverse regions, and of different socio-economic and ethnic backgrounds, to the extent feasible for the applicant institutions.

h. Adherence of proposed activities to the criteria and conditions described above.

i. Institutional commitment as demonstrated by financial and other support to the program, including the provision for adequate and appropriate personnel and institutional resources to achieve the program goals.

j. Follow-on Activities—proposals should provide a plan for continued follow-on activity (without USIA support) which insures that USIA-supported programs are not isolated events.

k. Evaluation plan—proposals should provide a plan for evaluation by the grantee institution to determine the success of the project.

1. Geographic diversity—the Agency will seek to achieve maximum geographic diversity in selection and placement of participants through its award of grants.

Preference Factor

Preference will be given to proposals that:

1. Demonstrate the widest geographic representation through participant recruitment;
2. Include an area studies component;
3. Include a thorough orientation component for all participants;
4. Provide for an approximately equal number of American and NIS participants; and
5. Recruit participants through open, merit-based competition.

Notice

The terms and conditions published in this RFP are binding and may not be modified by any USIA representative. Explanatory information provided by the Agency that contradicts published language will not be binding. Issuance of this request for proposals does not constitute an award commitment on the part of the government. Final award cannot be made until funds have been fully appropriated by Congress, allocated and committed through internal USIA procedures.

Notification

All applicants will be notified in writing of the results of the review process on or about November 19, 1993. All funded proposals will be subject to periodic reporting and evaluation requirements.

Options for Renewal

Subject to the availability of funding for FY 1995 and the satisfactory performance of grant programs, USIA may invite grantee organizations to submit proposals for renewals of awards.

Dated: June 28, 1993.

Barry Fulton,

Acting Associate Director, Bureau of Educational and Cultural Affairs.

[FR Doc. 93–15585 Filed 6–30–93; 8:45 am]

BILLING CODE 8230–01–M

federal register

Thursday
July 1, 1993

Part II

Department of Labor

Occupational Safety and Health Administration

29 CFR Part 1915

Incorporation of General Industry Safety and Health Standards Applicable to Shipyard Employment; Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1915

Occupational Safety and Health Standards for Shipyard Employment

AGENCY: Occupational Safety and Health Administration, Department of Labor.

ACTION: Final rule; technical amendments and redesignation.

SUMMARY: The Occupational Safety and Health Administration (OSHA) standards for shipyards are located principally in 29 CFR part 1915, Occupational Safety and Health Standards for Shipyard Employment. However, most standards for toxic substances protecting shipyard employees are printed in either 29 CFR part 1910 or in the 1970 Threshold Limit Values of the American Conference of Governmental Industrial Hygienists and cover shipyard employees by cross reference.

The Shipyard Employment Standards Advisory Committee has recommended generally that OSHA incorporate all toxic substance standards covering shipyards into 29 CFR part 1915. OSHA believes that direct incorporation of the existing toxic substance standards covering shipyard workers into 29 CFR part 1915 will be more convenient for and accessible to shipyard employers and therefore more protective of workers. There will be better knowledge of existing regulations and a higher level of compliance since almost all OSHA regulations covering the industry will be located in one, easily accessible place. Accordingly, OSHA is by this technical amendment incorporating into 29 CFR part 1915, a comprehensive subpart Z which includes the toxic substance standards and certain related standards applicable to shipyards.

EFFECTIVE DATE: July 1, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, OSHA Office of Public Affairs, United States Department of Labor, Room N–3641, 200 Constitution Avenue, NW., Washington, DC 20210, telephone (202) 219–8151.

SUPPLEMENTARY INFORMATION:

BACKGROUND AND RATIONALE

Most OSHA standards governing occupational safety for shipyards are printed in 29 CFR Part 1915, Occupational Safety and Health Standards for Shipyard Employment. However, part 1915 generally does not include the text of the health standards which cover shipyard employment. Rather, it incorporates those health standards by cross reference in other documents.

Specifically, part 1915 has incorporated by cross-reference health standards from two sources. The first, incorporated in §§ 1915.5, 1915.12(a)(3) and (b)(3), and 1915.32(b), consist of approximately 400 exposure limits for toxic substances which are listed in the 1970 Threshold Limit Values (TLV's) of the American Conference of Governmental Industrial Hygienists (ACGIH).

The second set of health standards incorporated into part 1915 by cross reference are the single substance standards and certain other health related standards located in 29 CFR part 1910, Occupational Safety and Health Standards for General Industry. The single substance standards are located in subpart Z of part 1910, Toxic and Hazardous Substances, at 29 CFR 1910.1001 to 1910.1048. These standards appear in a separate CFR volume, which contains most of the Shipyard Safety standards.

The Shipyard Employment Standards Advisory Committee (SESAC) was organized by OSHA pursuant to the Federal Advisory Committee Act and section 7(b) of the OSH Act, to recommend one comprehensive set of standards and accompanying rationale for the shipbuilding, ship repair, and shipbreaking industries by combining part 1910 and 1915 standards, and by updating, reorganizing, clarifying and simplifying those standards. The committee includes representatives from labor, management, government, and health and safety professionals. It holds public meetings which are announced in advance in the **Federal Register**. The general public may attend and address the committee.

At its May 13, 1991, meeting, SESAC recommended that OSHA directly incorporate in part 1915 a subpart Z which would include the full text of the health and related standards applicable to shipyards (see transcript pp. 149–156). By printing the health standards applicable to shipyards in part 1915, knowledge of their requirements would increase and this would lead to better protection for employees and greater convenience and clarity for shipyard employers.

OSHA concurs with the recommendations of SESAC[1]. It believes that direct incorporation of the health standards, already applicable to shipyards by cross-reference, into part 1915, has important benefits.

First, shipyard employees will have better and more consistent health protection because all the health standards applicable to them will be readily accessible and easy to reference. There will be better knowledge of requirements necessary to protect health.

Second, the shipyard industry and its managers will have a much more convenient source for all the health requirements applicable to the industry. There will be less confusion over what regulations are applicable. This clarification also will result in a greater degree of voluntary compliance.

Third, OSHA's proposal to update the air contaminants levels for shipyards (57 FR 26002, June 12, 1992) will be delayed because of the Eleventh Circuit Court of Appeals decision to vacate similar standards for general industry in the case of *AFL-CIO* v. *OSHA*, 965 F.2d 962 (1992). Consequently, convenient access to the 1970 TLV's for the shipyard industry will be necessary for a longer period and these technical amendments will be helpful for a longer period.

As stated, OSHA's standards for toxic and hazardous substances are contained in 29 CFR part 1910, subpart Z. The 29 CFR part 1910 substance-specific standards apply to shipyard employment by virtue of two provisions. First, for some standards, 29 CFR 1910.19 directly makes the standard applicable to shipyard employment. For example, 29 CFR 1910.19(c) states that the acrylonitrile standard set forth in § 1910.1045 applies to every employment and place of employment specified in §§ 1910.13, 1910.14 and 1910.15. Those sections refer to ship repairing, shipbuilding and shipbreaking, the activities now covered by part 1915, the shipyard employment standards.

Application of the remainder of the substance-specific standards to shipyards is accomplished by virtue of 29 CFR 1910.5(c)(2). That paragraph provides that any standard will apply to any employment and place of employment in any industry, even though particular standards are also prescribed for that industry, to the extent that none of such particular standards applies. Thus, for example, because none of the particular standards

[1] SESAC made several recommended revisions to the Access to employee exposure and medical records standard (§ 1910.20), notably with regard to the disposition of these records after an employer ceased doing business. While these revisions may be valid and worthwhile, they nevertheless could have resulted in reduced access by employees to these records. As these revisions are substantive, they could not be included in this technical amendment. OSHA will carefully review these recommended revisions, and determine whether they should be considered for future rulemaking.

applicable to the shipyard industry regulates exposure to beta-Naphthylamine, the beta Naphthylamine standard, at 29 CFR 1910.1009, applies to shipyard employment.

In addition to the substance-specific standards, part 1915 also incorporates the 1970 TLVs of the American Conference of Governmental Industrial Hygienists. Part 1915 refers to the TLVs in several locations. For example, §§ 1915.12, 1915.32, and 1915.33 refer to the threshold limit values. Section 1915.5 then identifies these "threshold limit values" as the Threshold Limit Values, 1970, of the ACGIH.

As the first step in directly incorporating into 29 CFR part 1915 the health standards applicable to shipyards, OSHA created a new subpart Z of part 1915 when it issued the cadmium standard on September 14, 1992, at 57 FR 42102, 42388–42389. OSHA incorporated the cadmium standard into that new subpart Z of part 1915 as § 1915.1027.

Elements of This Technical Amendment

1. This technical amendment creates a complete subpart Z, Toxic and Hazardous Substances, for part 1915 Shipyards. It incorporates into this subpart Z the health standards already applicable to shipyards. These include the single substance standards at 29 CFR 1910.1001–1048, which will be given the corresponding section numbers of 29 CFR 1915.1001–1915.1048 respectively. No substantive changes have been made to the requirements, but certain formal changes have been made to reflect the new location and appropriate cross references. Consequently, this incorporation is a technical amendment.

Excluded from this incorporation are the coke oven standard, 29 CFR 1910.1029, and the cotton dust standard, 29 CFR 1910.1043, because the operations covered by these standards would not be done in shipyards.

2. OSHA is placing the air contaminants levels for shipyards in a new 29 CFR 1915.1000, Table Z-Shipyards. This will follow the numeration and style used for general industry in part 1910. This format will make the table easier to use because it will follow the same pattern used for most industry. Section 1915.1000 and Table Z-Shipyards merely reprint in convenient form the 1970 TLV's which are already applicable to most operations in shipyards. No substantive changes are made. Consequently, this is also a technical amendment.

As noted, most areas in shipyards are presently covered by the 1970 TLV's. However, since the shipyard regulations are an amalgam of three separate bodies of regulations for shipbuilding, ship repair, and shipbreaking, a few operations have been technically covered by the 1971 OSHA permissible exposure limits (PELs). See 47 FR 16984 (April 20, 1982).

Specifically, the shipbreaking and ship repairing subsectors, and the exposure to toxic solvents and removers in the shipbuilding and ship repair subsectors, are covered by the 1970 TLV's of ACGIH. See §§ 1915.5, 1915.11, 1915.12, 1915.32, and 1915.33. The 1971 OSHA PELs, which are contained in § 1910.1000, will continue to apply to shipbuilding operations not involving toxic solvents and removers. See 29 CFR 1910.5(c).

3. ACGIH made clear that the 1970 TLV "Nuisance Particulate" standard covered both organic and inorganic particulates. Appendix D of the 1970 TLV booklet listed as examples of typical nuisance particulates, various organic particulates such as cellulose, vegetable oil mists, starch, and sucrose. Some confusion was created because ACGIH printed the nuisance particulate limit as part of a table which was headed "Mineral Dusts." To resolve this confusion and to make it clear that the "nuisance particulate" exposure limit covers both inorganic and organic nuisance particulates, OSHA is including a footnote to this effect after the "Inert or Nuisance Particulate" entry. OSHA is also including a duplicate listing titled "Particulates not otherwise regulated (PNOR)" with the same exposure limit. The purpose of this duplicate listing is to make the limit easier to find by using current terminology.

4. The hazard communication standard is currently included in part 1915 as 29 CFR 1915.99. As this is primarily a health-related standard, it is more convenient to redesignate it as § 1915.1200 to reflect the same numeration as general industry and to include it with the other health standards in subpart Z of part 1915.

5. Two other health-related standards already applicable to shipyards by cross reference are being incorporated in full text into subpart Z as recommended by SESAC. These standards are § 1910.20, Access to employee exposure and medical records, which will be incorporated as § 1915.1120, and § 1910.1450 Occupational exposure to hazardous chemicals in laboratories, which will be incorporated as § 1915.1450.

Necessary consequential changes are made to §§ 1915.5, 1915.12, and 1915.32 to reference subpart Z (which now includes the 1970 TLV's) rather than referencing the ACGIH publication.

6. The general industry asbestos standard at 29 CFR 1910.1001 now specifically applies to shipyards. It is being directly incorporated into part 1915 as § 1915.1001. Shipyard representatives have recommended to OSHA in the asbestos remand rulemaking that an asbestos standard tailored to shipyards be developed. OSHA is presently considering this issue, but has not made a final decision. If OSHA concludes that changes in the asbestos standard for shipyards are appropriate, OSHA will amend § 1915.1001 to reflect any such changes when the final rule on the asbestos remand is published in the **Federal Register**.

Conclusion

As this is a technical amendment, it is adopted for the convenience of the shipyard employers and employees, it effects no significant substantive changes, and it has also been supported by SESAC. OSHA concludes that it is unnecessary to provide for notice and comment, as permitted by section 4 of the Administrative Procedure Act, 5 U.S.C. 553(b) and § 1911.5.

As this is not a substantive rule, it may take effect upon publication in the **Federal Register**. OSHA finds good cause for this rule to take effect June 30, 1993, so that these technical amendments will be incorporated in the 1993 edition of the CFR and thereby increase the convenience to the public as soon as possible. See 5 U.S.C. 553(d).

For the same reasons, it is certified that no substantive changes are being made which would require analysis under the Regulatory Flexibility Act or under Executive Order 12291.

List of Subjects in 29 CFR Part 1915

Shipyards, Shipbuilding, Ship repairing, Shipbreaking, Toxic chemicals, Air contaminants, Coal tar pitch volatile, 4=Nitrobiphenyl, alpha-Naphthylamine, Methyl chloromethyl either, 3,3'-Dichlorobenzidine (and its salts), bis-Chloromethyl either, beta-Naphthylamine, Benzidine, 4-Aminodiphenyl, Ethyleneimine, beta-Propiolactone, 2-Actylaminofluorene, 4-Dimethylaminoazobenzene, N-Nitrosodimethylamine, Vinyl chloride, Inorganic arsenic, Lead, Benzene, Acrylonitrile, Ethylene oxide, Formaldehyde, Asbestos, Hazard Communication, Laboratories, Medical records, Monitoring records.

Authority and Signature

This document was prepared under the direction of David C. Zeigler, Acting Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210.

Accordingly, pursuant to sections 6 and 8 of the Occupational Safety and Health Act (29 U.S.C. 655, 657); section 41, Longshore and Harbor Workers Compensation Act (33 U.S.C. 941); section 4 of the Administrative Procedure Act (5 U.S.C. 553); and Secretary of Labor's Order No. 1–90 (55 FR 9033); OSHA is issuing these final technical amendments.

Signed at Washington, DC, this 24th day of June, 1993.

David C. Zeigler,

Acting Assistant Secretary of Labor.

29 CFR part 1915 is amended as follows:

PART 1915—[AMENDED]

1. The authority citation of part 1915 is revised to read as follows:

Authority: Sec. 41, Longshore and Harbor Workers Compensation Act (33 U.S.C. 941); secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); sec. 4 of the Administrative Procedure Act (5 U.S.C. 553); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736) or 1–90 (55 FR 9033), as applicable; 29 CFR part 1911.

2. Section 1915.5 is amended by adding a sentence to the paragraph incorporating the Threshold Limit Values (the seventh paragraph that lists organizations that are not agencies of the U.S. government). As amended, this paragraph reads as follows:

§ 1915.5 Reference specifications, standards, and codes.

* * * * *

Threshold Limit Values, 1970, American Conference of Governmental Industrial Hygienists, 1014 Broadway, Cincinnati, Ohio 45202, subpart B, § 1915.12(a)(3); subpart C, § 1915.32(b). These threshold limit values are contained in § 1915.1000, Table Z.

* * * * *

3. Paragraphs (a)(3) and (b)(3) of § 1915.12 are revised to read as follows:

§ 1915.12 Precautions before entering.

(a) *Flammable atmospheres and residues.*

* * * * *

(3) If the atmosphere in the space to be entered is found to contain a concentration of flammable vapor or gas below the level immediately dangerous to life as defined in § 1915.152(b)(1), but above the permissible exposure limits specified in 29 CFR part 1915, table Z, employees shall be protected in accordance with the requirements of § 1915.152 (a), and (c), (d), or (e), whichever is applicable.

(b) *Toxic atmospheres and residues.*

* * * * *

(3) If the atmosphere in the space to be entered is found to contain a concentration of toxic contaminants below the level immediately dangerous to life as defined in § 1915.152 (b)(1), but above the permissible exposure limits specified in 29 CFR part 1915, table Z, employees shall be protected in accordance with the requirements of § 1915.152 (a), and (c), (d), or (e), whichever is applicable.

* * * * *

§ 1915.99 [Redesignated as § 1915.1200]

4. Section 1915.99 Hazard communication, is redesignated as § 1915.1200.

5. Subparts M–Y are reserved and subpart Z is revised to read as follows:

* * * * *

Subparts M–Y [Reserved]

Subpart Z—Toxic and Hazardous Substances

Sec.

1915.1000 Air contaminants.
1915.1001 Asbestos.
1915.1002 Coal tar pitch volatiles; interpretation of term.
1915.1003 4-Nitrobiphenyl.
1915.1004 alpha-Naphthylamine.
1915.1005 [Reserved]
1915.1006 Methyl chloromethyl ether.
1915.1007 3,3'-Dichlorobenzidiene (and its salts).
1915.1008 bis-Chloromethyl ether.
1915.1009 beta-Naphthylamine.
1915.1010 Benzidine.
1915.1011 4-Aminodiphenyl.
1915.1012 Ethyleneimine.
1915.1013 beta-Propiolactone.
1915.1014 2-Acetylaminofluorene.
1915.1015 4-Dimethylaminoazobenzene.
1915.1016 N-Nitrosodimethylamine.
1915.1017 Vinyl chloride.
1915.1018 Inorganic arsenic.
1915.1025 Lead.
1915.1027 Cadmium.
1915.1028 Benzene.
1915.1030 Bloodborne pathogens
1915.1044 1,2 dibromo-3-chloropropane
1915.1045 Acrylonitrile.
1915.1047 Ethylene oxide.
1915.1048 Formaldehyde.
1915.1050 Methylenedianiline
1915.1120 Access to employee exposure and medical records.
1915.1200 Hazard communication.
1915.1450 Occupational exposure to hazardous chemicals in laboratories.

Authority: Sec. 41, Longshore and Harbor Workers Compensation Act (33 U.S.C. 941); secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); sec. 4 of the Administrative Procedure Act (5 U.S.C. 553); Secretary of Labor's Order No. 12–71 (36 FR 8754, 8–76 (41 FR 25059), 9–83 (48 FR 35736) or 1–90 (55 FR 9033), as applicable; 29 CFR part 1911.

* * * * *

Subparts M–Y [Reserved]

Subpart Z—Toxic and Hazardous Substances

§ 1915.1000 Air contaminants.

Wherever this section applies, an employees's exposure to any substance listed in Table Z—Shipyards of this section shall be limited in accordance with the requirements of the following paragraphs of this section.

(a) (1) *Substances with limits preceded by "C"—Ceiling Values.* An employee's exposure to any substance in Table Z—Shipyards, the exposure limit of which is preceded by a "C," shall at no time exceed the exposure limit given for that substance. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure which shall not be exceeded at any time over a working day.

(2) *Other Substances—8-hour Time Weighted Averages.* An employee's exposure to any substance in Table Z—Shipyards , the exposure limit of which is not preceded by a "C," shall not exceed the 8-hour Time Weighted Average given for that substance in any 8-hour work shift of a 40-hour work week.

(b)—(c) [Reserved]

(d) *Computation formulae.* The computation formula which shall apply to employee exposure to more than one substance for which 8-hour time weighted averages are listed in subpart Z of 29 CFR part 1915 in order to determine whether an employee is exposed over the regulatory limit is as follows:

(1)(i) The cumulative exposure for an 8-hour work shift shall be computed as follows:

$$E=(C_aT_a+C_bT_b+...C_nT_n)\div 8$$

Where:

E is the equivalent exposure for the working shift.

C is the concentration during any period of time T where the concentration remains constant.

T is the duration in hours of the exposure at the concentration C.

The value of E shall not exceed the 8-hour time weighted average specified in subpart Z of 29 CFR Part 1915 for the material involved.

(ii) To illustrate the formula prescribed in paragraph (d)(1)(i) of this

section, assume that Substance A has an 8-hour time weighted average limit of 100 ppm noted in Table Z—Shipyards. Assume that an employee is subject to the following exposure:

Two hours exposure at 150 p/m
Two hours exposure at 75 p/m
Four hours exposure at 50 p/m

Substituting this information in the formula, we have

$(2\times150+2\times75+4\times50)\div8=81.25$ p/m

Since 81.25 ppm is less than 100 p.p.m., the 8-hour time weighted average limit, the exposure is acceptable.

(2)(i) in case of a mixture of air contaminants an employer shall compute the equivalent exposure as follows:

$E_m=(C_1+L_1+C_2+L_2)+...(C_n+L_n)$

Where:

E_m is the equivalent exposure for the mixture.

C is the concentration of a particular contaminant.

L is the exposure limit for that substance specified in Subpart Z of 29 CFR Part 1915.

The value of E_m shall not exceed unity (1).

(ii) To illustrate the formula prescribed in paragraph (d)(2)(i) of this section, consider the following exposures:

Substance	Actual concentration of 8 hour exposure (ppm)	8 hr. TWA PEL (ppm)
B	500	1000
C	45	200
D	40	200

Substituting in the formula, we have:
Em=500÷1,000+45÷200+40÷200
Em=0.500+0.225+0.200
Em=0.925

Since Em is less than unity (1), the exposure combination is within acceptable limits.

Table Z—Shipyards

Substance	CAS No.[d]	ppm[a] [c]	mg/m[3] [b] [c]	Skin Designation
Abate; see Temephos.				
Acetaldehyde	75-07-0	200	360	—
Acetic acid	64-19-7	10	25	—
Acetic anhydride	108-24-7	5	20	—
Acetone	67-64-1	1000	2400	—
Acetonitrile	75-05-8	40	70	—
2-Acetylaminofluorine; see § 1915.1014	53-96-3			
Acetylene	74-86-2	E		
Acetylene dichloride; see 1,2-Dichloroethylene.				
Acetylene tetrabromide	79-27-6	1	14	—
Acrolein	107-02-8	0.1	0.25	—
Acrylamide	79-06-1	—	0.3	X
Acrylonitrile; see § 1915.1045	107-13-1			
Aldrin	309-00-2	—	0.25	X
Allyl alcohol	107-18-6	2	5	X
Allyl chloride	107-05-1	1	3	—
Allyl glycidyl ether (AGE)	106-92-3	(C)10	(C)45	—
Allyl propyl disulfide	2179-59-1	2	12	—
alpha-Alumina	1344-28-1			
Total dust		—	15	—
Respirable fraction		—	5	—
Aluminum, (as Al) Metal	7429-90-5			
Total dust		—	15	—
Respirable fraction		—	5	—
Alundum; see alpha-Alumina				
4-Aminodiphenyl; see § 1915.1011	92-67-1			
2-Aminoethanol; see Ethanolamine.				
2-Aminopyridine	504-29-0	0.5	2	—
Ammonia	7664-41-7	50	35	—
Ammonium sulfamate	7773-06-0			
Total dust		—	15	—
Respirable fraction		—	5	—
n-Amyl acetate	628-63-7	100	525	—
sec-Amyl acetate	626-38-0	125	650	—
Aniline and homologs	62-53-3	5	19	X
Anisidine (o-, p-isomers)	29191-52-4	—	0.5	X
Antimony and compounds (as Sb)	7440-36-0	—	0.5	—
ANTU (alpha Naphthylthiourea)	86-88-4	—	0.3	—
Argon	7440-37-1	E		
Arsenic, Inorganic compounds (as As); see § 1915.1018	7440-38-2	—	—	—
Arsenic, organic compounds (as As)	7440-38-2	—	0.5	—
Arsine	7784-42-1	0.05	0.2	—
Asbestos; see 1915.1001.				
Azinphos-methyl	86-50-0	—	0.2	X
Barium, soluble compounds (as Ba)	7440-39-3	—	0.5	—
Barium sulfate	7727-43-7			
Total dust		—	15	—
Respirable fraction		—	5	—
Benomyl	17804-35-2			
Total dust		—	15	—

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [c]	mg/m[3] [b] [c]	Skin Designation
Respirable fraction		—	5	—
Benzene[e]; see § 1915.1028	71-43-2			
Benzidine; see § 1915.1010	92-87-5			
p-Benzoquinone; see Quinone.				
Benzo(a)pyrene; see Coal tar pitch volatiles.				
Benzoyl peroxide	94-36-0	—	5	—
Benzyl chloride	100-44-7	1	5	—
Beryllium and beryllium compounds (as Be)	7440-41-7	—	0.002	—
Biphenyl; see Diphenyl.				
Bismuth telluride, Undoped	1304-82-1			
Total dust		—	15	—
Respirable fraction		—	5	—
Bisphenol A; see Diglycidyl ether.				
Boron oxide	1303-86-2			
Total dust		—	15	—
Boron tribromide	10294-33-4	1	10	—
Boron trifluoride	7637-07-2	(C)1	(C)3	—
Bromine	7726-95-6	0.1	0.7	—
Bromine pentafluoride	7789-30-2	0.1	0.7	—
Bromoform	75-25-2	0.5	5	X
Butadiene (1,3-Butadiene)	106-99-0	1000	2200	—
Butanethiol; see Butyl mercaptan.				
2-Butanone (Methyl ethyl ketone)	78-93-3	200	590	—
2-Butoxyethanol	111-76-2	50	240	X
n-Butyl-acetate	123-86-4	150	710	—
sec-Butyl acetate	105-46-4	200	950	—
tert-Butyl acetate	540-88-5	200	950	—
n-Butyl alcohol	71-36-3	100	300	—
sec-Butyl alcohol	78-92-2	150	450	—
tert-Butyl alcohol	75-65-0	100	300	—
Butylamine	109-73-9	(C)5	(C)15	X
tert-Butyl chromate (as CrO_3)	1189-85-1	—	(C)0 1	X
n-Butyl glycidyl ether (BGE)	2426-08-6	50	270	—
Butyl mercaptan	109-79-5	0.5	1.5	—
p-tert-Butyltoluene	98-51-1	10	60	—
Cadmium dust fume (as Cd); see 1915.1027	7440-43-9	—	—	—
Calcium carbonate	1317-65-3			
Total dust		—	15	—
Respirable fraction		—	5	—
Calcium hydroxide	1305-62-0	—	—	—
Calcium hydroxide.				
Total dust		—	15	—
Respirable fraction		—	5	—
Calcium oxide	1305-78-8	—	5	—
Calcium silicate	1344-95-2			
Total dust		—	15	—
Respirable fraction		—	5	—
Calcium sulfate	7778-18-9			
Total dust		—	15	—
Respirable fraction		—	5	—
Camphor, synthetic	76-22-2	—	2	—
Carbaryl (Sevin)	63-25-2	—	5	—
Carbon black	1333-86-4	—	3.5	—
Carbon dioxide	124-38-9	5000	9000	—
Carbon disulfide	75-15-0	20	60	X
Carbon monoxide	630-08-0	50	55	—
Carbon tetrachloride	56-23-5	10	65	X
Cellulose	9004-34-6			
Total dust		—	15	—
Respirable fraction		—	5	—
Chlordane	57-74-9	—	0.5	X
Chlorinated camphene	8001-35-2	—	0.5	X
Chlorinated diphenyl oxide	55720-99-5	—	0.5	—
Chlorine	7782-50-5	1	3	—
Chlorine trifluoride	7790-91-2	(C)0.1	(C)0.4	—
Chloroacetaldehyde	107-20-0	(C)1	(C)3	—
a-Chloroacetophenone (Phenacyl chloride)	532-27-4	0.05	0.3	—
Chlorobenzene	108-90-7	75	350	—
o-Chlorobenzylidene malononitrile	2698-41-1	0.05	0.4	—
Chlorobromomethane	74-97-5	200	1050	—
2-Chloro-1,3-butadiene; see beta-Chloroprene.				

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] *	mg/m[3] [b] *	Skin Designation
Chlorodiphenyl (42% Chlorine) (PCB)	53469-21-9	—	1	X
Chlorodiphenyl (54% Chlorine) (PCB)	11097-69-1	—	0.5	X
1-Chloro,2,3-epoxypropane; see Epichlorohydrin.				
2-Chloroethanol; see Ethylene chlorohydrin.				
Chloroethylene; see Vinyl chloride.				
Chloroform (Trichloromethane)	67-66-3	50	240	—
bis(Chloromethyl) ether; see § 1915.1008	542-88-1			
Chloromethyl methyl ether; see § 1915.1006	107-30-2			
1-Chloro-1-nitropropane	600-25-9	20	100	—
Chloropicrin	76-06-2	0.1	0.7	—
beta-Chloroprene	126-99-8	25	90	X
2-Chloro-6-(trichloromethyl) pyridine	1929-82-4			
Total dust		—	15	—
Respirable fraction		—	5	—
Chromic acid and chromates.				
(as CrO_3)	Varies with compound	—	0.1	—
Chromium (II) compounds.				
(as Cr)	7440-47-3	—	0.5	—
Chromium (III) compounds.				
(as Cr)	7440-47-3	—	0.5	—
Chromium metal and insol. salts (as Cr)	7440-47-3	—	1	—
Chrysene; see Coal tar pitch volatiles.				
Clopidol	2971-90-6			
Total dust		—	15	—
Respirable fraction		—	5	—
Coal tar pitch volatiles (benzene soluble fraction), anthracene, BaP, phenanthrene, acridine, chrysene, pyrene	65966-93-2	—	0.2	—
Cobalt metal, dust, and fume (as Co)	7440-48-4	—	0 1	—
Copper	7440-50-8			
Fume (as Cu)		—	0.1	—
Dusts and mists (as Cu)		—	1	—
Corundum; see Emery.				
Cotton dust (raw)		—	1	
Crag herbicide (Sesone)	136-78-7			
Total dust		—	15	—
Respirable fraction		—	5	—
Cresol, all isomers	1319-77-3	5	22	X
Crotonaldehyde	123-73-9; 4170-30-3	2	6	
Cumene	98-82-8	50	245	X
Cyanides (as CN)	Varies with Compound	—	5	—
Cyanogen	460-19-5	10	—	—
Cyclohexane	110-82-7	300	1050	—
Cyclohexanol	108-93-0	50	200	—
Cyclohexanone	108-94-1	50	200	—
Cyclohexene	110-83-8	300	1015	—
Cyclonite	121-82-4	—	1.5	X
Cyclopentadiene	542-92-7	75	200	—
2,4-D (Dichlorophenoxyacetic acid)	94-75-7	—	10	—
Decaborane	17702-41-9	0.05	0.3	X
Demeton (Systox)	8065-48-3	—	0.1	X
Diacetone alcohol (4-Hydroxy-4-methyl-2-pentanone)	123-42-2	50	240	—
1,2-Diaminoethane; see Ethylenediamine.				
Diazomethane	334-88-3	0.2	0.4	—
Diborane	19287-45-7	0.1	0.1	—
1,2-Dibromo-3-chloropropane (CBCP); see § 1915.1044	96-12-8		—	
1,2-Dibromoethane; see Ethylene dibromide.				
Dibutyl phosphate	107-66-4	1	5	—
Dibutyl phthalate	84-74-2	—	5	—
Dichloroacetylene	7572-29-4	(C)0.1	(C)0.4	—
o-Dichlorobenzene	95-50-1	(C)50	(C)300	—
p-Dichlorobenzene	106-46-7	75	450	—
3,3'-Dichlorobenzidine; see § 1915.1007	91-94-1			
Dichlorodifluoromethane	75-71-8	1000	4950	—
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	—	0.2	—
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	—	1	X
1,1-Dichloroethane	75-34-3	100	400	—
1,2-Dichloroethane; see Ethylene dichloride.				

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [c]	mg/m[3] [b] [c]	Skin Designation
1,2-Dichloroethylene	540-59-0	200	790	—
Dichloroethyl ether	111-44-4	(C)15	(C)90	X
Dichloromethane; see Methylene chloride.				
Dichloromonofluoromethane	75-43-4	1000	4200	—
1,1-Dichloro-1-nitroethane	594-72-9	(C)10	(C)60	—
1,2-Dichloropropane; see Propylene dichloride.				
Dichlorotetrafluoroethane	76-14-2	1000	7000	—
Dichlorvos (DDVP)	62-73-7	—	1	X
Dicyclopentadienyl iron	102-54-5			
Total dust		—	15	—
Respirable fraction		—	5	—
Dieldrin	60-57-1	—	0.25	X
Diethylamine	109-89-7	25	75	—
2-Diethylaminoethanol	100-37-8	10	50	—
Diethylene triamine	111-40-0	(C)10	(C)42	X
Diethyl ether; see Ethyl ether.				
Difluorodibromomethane	75-61-6	100	860	—
Diglycidyl ether (DGE)	2238-07-5	(C)0.5	(C)2.8	—
Dihydroxybenzene; see Hydroquinone.				
Diisobutyl ketone	108-83-8	50	290	—
Diisopropylamine	108-18-9	5	20	X
4-Dimethylaminoazobenzene; see § 1915.1015	60-11-7			
Dimethoxymethane; see Methylal.				
Dimethyl acetamide	127-19-5	10	35	X
Dimethylamine	124-40-3	10	18	—
Dimethylaminobenzene; see Xylidine.				
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	5	25	X
Dimethylbenzene; see Xylene.				
Dimethyl-1,2-dibromo- 2,2-dichloroethyl phosphate	300-76-5	—	3	—
Dimethylformamide	68-12-2	10	30	X
2,6-Dimethyl-4-heptanone; see Diisobutyl ketone.				
1,1-Dimethylhydrazine	57-14-7	0.5	1	X
Dimethylphthalate	131-11-3	—	5	—
Dimethyl sulfate	77-78-3	1	5	X
Dinitrobenzene (all isomers)			1	X
(ortho)	528-29-0			
(meta)	99-65-0			
(para)	100-25-4			
Dinitro-o-cresol	534-52-1	—	0.2	X
Dinitrotoluene	25321-14-6	—	1.5	X
Dioxane (Diethylene dioxide)	123-91-1	100	360	X
Diphenyl (Biphenyl)	92-52-4	0.2	1	—
Diphenylamine	122-39-4	—	10	—
Diphenylmethane diisocyanate; see Methylene bisphenyl isocyanate.				
Dipropylene glycol methyl ether	34590-94-8	100	600	X
Di-sec octyl phthalate (Di-(2-ethylhexyl) phthalate)	117-81-7	—	5	—
Emery	12415-34-8			
Total dust		—	15	—
Respirable fraction		—	5	—
Endosulfan	115-29-7	—	0.1	X
Endrin	72-20-8	—	0.1	X
Epichlorohydrin	106-89-8	5	19	X
EPN	2104-64-5	—	0.5	X
1,2-Epoxypropane; see Propylene oxide.				
2,3-Epoxy-1-propanol; see Glycidol.				
Ethane	74-84-0	E		
Ethanethiol; see Ethyl mercaptan.				
Ethanolamine	141-43-5	3	6	—
2-Ethoxyethanol (Cellosolve)	110-80-5	200	740	X
2-Ethoxyethyl acetate (Cellosolve acetate)	111-15-9	100	540	X
Ethyl acetate	141-78-6	400	1400	—
Ethyl acrylate	140-88-5	25	100	X
Ethyl alcohol (Ethanol)	64-17-5	1000	1900	—
Ethylamine	75-04-7	10	18	—
Ethyl amyl ketone (5-Methyl-3-heptanone)	541-85-5	25	130	—
Ethyl benzene	100-41-4	100	435	—
Ethyl bromide	74-96-4	200	890	—
Ethyl butyl ketone (3-Heptanone)	106-35-4	50	230	—
Ethyl chloride	75-00-3	1000	2600	—
Ethyl ether	60-29-7	400	1200	—

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a]	mg/m[3][b]	Skin Designation
Ethyl formate	109-94-4	100	300	—
Ethyl mercaptan	75-08-1	0.5	1	—
Ethyl silicate	78-10-4	100	850	—
Ethylene	74-85-1	E		
Ethylene chlorohydrin	107-07-3	5	16	X
Ethylenediamine	107-15-3	10	25	—
Ethylene dibromide	106-93-4	(C)25	(C)190	X
Ethylene dichloride (1,2-Dichloroethane)	107-06-2	50	200	—
Ethylene glycol dinitrate	628-96-6	(C)0.2	(C)1	X
Ethylene glycol methyl acetate; see Methyl cellosolve acetate.				
Ethyleneimine; see § 1915.1012	151-56-4			
Ethylene oxide; see § 1915.1047	75-21-8			
Ethylidene chloride; see 1,1-Dichloroethane.				
N-Ethylmorpholine	100-74-3	20	94	X
Ferbam	14484-64-1			
Total dust		—	15	—
Ferrovanadium dust	12604-58-9	—	1	—
Fibrous Glass.				
Total dust			15	—
Respirable fraction		—	5	—
Fluorides (as F)	Varies with compound	—	2.5	—
Fluorine	7782-41-4	0.1	0.2	—
Fluorotrichloromethane (Trichlorofluoromethane)	75-69-4	1000	5600	—
Formaldehyde; see § 1915.1048	50-00-0			
Formic acid	64-18-6	5	9	—
Furfural	98-01-1	5	20	X
Furfuryl alcohol	98-00-0	50	200	—
Gasoline	8006-61-9		A[1]	—
Glycerin (mist)	56-81-5			
Total dust		—	15	—
Respirable fraction		—	5	—
Glycidol	556-52-5	50	150	—
Glycol monoethyl ether; see 2-Ethoxyethanol.				
Graphite, natural, respirable dust	7782-42-5	([2])	([2])	([2])
Graphite, synthetic				
Total dust		—	15	—
Respirable fraction		—	5	—
Guthion; see Azinphos methyl.				
Gypsum	13397-24-5			
Total dust		—	15	—
Respirable fraction		—	5	—
Hafnium	7440-58-6	—	0.5	—
Helium	7440-59-7	E		
Heptachlor	76-44-8	—	0.5	X
Heptane (n-Heptane)	142-82-5	500	2000	—
Hexachloroethane	67-72-1	1	10	X
Hexachloronaphthalene	1335-87-1	—	0.2	X
n-Hexane	110-54-3	500	1800	—
2-Hexanone (Methyl n-butyl ketone)	591-78-6	100	410	—
Hexone (Methyl isobutyl ketone)	108-10-1	100	410	—
sec-Hexyl acetate	108-84-9	50	300	—
Hydrazine	302-01-2	1	1.3	X
Hydrogen	1333-74-0	E		
Hydrogen bromide	10035-10-6	3	10	—
Hydrogen chloride	7647-01-0	(C)5	(C)7	—
Hydrogen cyanide	74-90-8	10	11	X
Hydrogen fluoride (as F)	7664-39-3	3	2	—
Hydrogen peroxide	7722-84-1	1	1.4	—
Hydrogen selenide (as Se)	7783-07-5	0.05		
Hydrogen sulfide	7783-06-4	10	15	—
Hydroquinone	123-31-9	—	2	—
Indene	95-13-6	10	45	—
Indium and compounds (as In)	7440-74-6	—	0.1	—
Iodine	7553-56-2	(C)0.1	(C)1	—
Iron oxide fume	1309-37-1	—	10	—
Iron salts (soluble) (as Fe)	Varies with compound	—	1	—
Isoamyl acetate	123-92-2	100	525	—
Isoamyl alcohol (primary and secondary)	123-51-3	100	360	—

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [b]	mg/m³[b] [c]	Skin Designation
Isobutyl acetate	110-19-0	150	700	—
Isobutyl alcohol	78-83-1	100	300	—
Isophorone	78-59-1	25	140	—
Isopropyl acetate	108-21-4	250	950	—
Isopropyl alcohol	67-63-0	400	980	—
Isopropylamine	75-31-0	5	12	—
Isopropyl ether	108-20-3	500	2100	—
Isopropyl glycidyl ether (IGE)	4016-14-2	50	240	—
Kaolin	1332-58-7			
Total dust		—	15	—
Respirable fraction		—	5	—
Ketene	463-51-4	0.5	0.9	—
Lead, inorganic (as Pb); see § 1915.1025	7439-92-1	—	—	—
Limestone	1317-65-3			
Total dust		—	15	—
Respirable fraction		—	5	—
Lindane	58-89-9	—	0.5	X
Lithium hydride	7580-67-8	—	0.025	—
L.P.G. (Liquefied petroleum gas)	68476-85-7	1000	1800	
Magnesite	546-93-0			
Total dust		—	15	—
Respirable fraction		—	5	—
Magnesium oxide fume	1309-48-4			
Total particulate		15	—	—
Malathion	121-75-5			
Total dust		—	15	X
Maleic anhydride	108-31-6	0.25		
Manganese compounds (as Mn)	7439-96-5	—	(C)5	—
Manganese fume (as Mn)	7439-96-5	—	(C)5	—
Marble	1317-65-3			
Total dust		—	15	—
Respirable fraction		—	5	—
Mercury (aryl and inorganic)(as Hg)	7439-97-6		0.1	X
Mercury (organo) alkyl compounds (as Hg)	7439-97-6	—	0.01	X
Mercury (vapor) (as Hg)	7439-97-6	—	0.1	X
Mesityl oxide	141-79-7	25	100	—
Methane	74-82-8	E		
Methanethiol; see Methyl mercaptan.				
Methoxychlor	72-43-5			
Total dust		—	15	—
2-Methoxyethanol (Methyl cellosolve)	109-86-4	25	80	X
2-Methoxyethyl acetate (Methyl cellosolve acetate)	110-49-6	25	120	X
Methyl acetate	79-20-9	200	610	—
Methyl acetylene (Propyne)	74-99-7	1000	1650	—
Methyl acetylene-propadiene mixture (MAPP)		1000	1800	—
Methyl acrylate	96-33-3	10	35	X
Methylal (Dimethoxy-methane)	109-87-5	1000	3100	—
Methyl alcohol	67-56-1	200	260	—
Methylamine	74-89-5	10	12	—
Methyl amyl alcohol; see Methyl isobutyl carbinol.				
Methyl n-amyl ketone	110-43-0	100	465	—
Methyl bromide	74-83-9	(C)20	(C)80	X
Methyl butyl ketone; see 2-Hexanone.				
Methyl cellosolve; see 2-Methoxyethanol.				
Methyl cellosolve acetate; see 2-Methoxyethyl acetate.				
Methyl chloride	74-87-3	100	210	-
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6	350	1900	—
Methylcyclohexane	108-87-2	500	2000	—
Methylcyclohexanol	25639-42-3	100	470	—
o-Methylcyclohexanone	583-60-8	100	460	X
Methylene chloride	75-09-2	500	1740	—
Methyl ethyl ketone (MEK); see 2-Butanone.				
Methyl formate	107-31-3	100	250	—
Methyl hydrazine (Monomethyl hydrazine)	60-34-4	(C)0.2	(C)0.35	X
Methyl iodide	74-88-4	5	28	X
Methyl isoamyl ketone	110-12-3	100	475	—
Methyl isobutyl carbinol	108-11-2	25	100	X
Methyl isobutyl ketone; see Hexone.				
Methyl isocyanate	624-83-9	0.02	0.05	X
Methyl mercaptan	74-93-1	0.5	1	—
Methyl methacrylate	80-62-6	100	410	100

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [c]	mg/m[3] [b] [c]	Skin Designation
Methyl propyl ketone; see 2-Pentanone.				
Methyl silicate	681–84–5	5	30	—
alpha-Methyl styrene	98–83–9	(C)100	(C)480	—
Methylene bisphenyl isocyanate (MDI)	101–68–8	(C)0.02	(C)0.2	—
Mica; see Silicates.				
Mineral wool.				
Total dust		—	15	—
Respirable dust		—	5	—
Molybdenum (as Mo)	7439–98–7			
Soluble compounds		—	5	—
Insoluble compounds.				
Total dust		—	15	—
Monomethyl aniline	100–61–8	2	9	X
Monomethyl hydrazine; see Methyl hydrazine.				
Morpholine	110–91–8	20	70	X
Naphtha (Coal tar)	8030–30–6	100	400	—
Naphthalene	91–20–3	10	50	—
alpha-Naphthylamine; see § 1915.1004	134–32–7			
beta-Naphthylamine; see § 1915.1009	91–59–8			—
Neon	7440–01–9	E		
Nickel carbonyl (as Ni)	13463–39–3	0.001	0.007	—
Nickel, metal and insoluble compounds (as Ni)	7440–02–0	—	1	—
Nickel, soluble compounds (as Ni)	7440–02–0	—	1	—
Nicotine	54–11–5	—	0.5	X
Nitric acid	7697–37–2	2	5	—
Nitric oxide	10102–43–9	25	30	—
p-Nitroaniline	100–01–6	1	6	X
Nitrobenzene	98–95–3	1	5	X
p-Nitrochlorobenzene	100–00–5	—	1	X
4-Nitrodiphenyl; see § 1915.1003	92–93–3			
Nitroethane	79–24–3	100	310	—
Nitrogen	7727–37–9	E		
Nitrogen dioxide	10102–44–0	(C)5	(C)9	—
Nitrogen trifluoride	7783–54–2	10	29	—
Nitroglycerin	55–63–0	(C)0.2	(C)2	X
Nitromethane	75–52–5	100	250	—
1-Nitropropane	108–03–2	25	90	—
2-Nitropropane	79–46–9	25	90	—
N-Nitrosodimethylamine; see § 1915.1016	62–79–9			—
Nitrotoluene (all isomers)		5	30	X
o-isomer	88–72–2;			
m-isomer	99–08–1;			
p-isomer	99–99–0			
Nitrotrichloromethane; see Chloropicrin.				
Nitrous oxide	10024–97–2	E		
Octachloronaphthalene	2234–13–1	—	0.1	X
Octane	111–65–9	400	1900	—
Oil mist, mineral	8012–95–1	—	5	—
Osmium tetroxide (as Os)	20816–12–0	—	0.002	—
Oxalic acid	144–62–7	—	1	—
Oxygen difluoride	7783–41–7	0.05	0.1	—
Ozone	10028–15–6	0.1	0.2	—
Paraquat, respirable dust	4685–14–7; 1910–42–5; 2074–50–2	—	0.5	X
Parathion	56–38–2	—	0.1	—
Particulates not otherwise regulated.				
Total dust organic and inorganic		—	15	—
PCB; see Chlorodiphenyl (42% and 54% chlorine).				
Pentaborane	19624–22–7	0.005	0.01	—
Pentachloronaphthalene	1321–64–8	—	0.5	X
Pentachlorophenol	87–86–5	—	0.5	X
Pentaerythritol	115–77–5			
Total dust		—	15	—
Respirable fraction		—	5	—
Pentane	109–66–0	500	1,500	—
2-Pentanone (Methyl propyl ketone)	107–87–9	200	700	—
Perchloroethylene (Tetrachloroethylene)	127–18–4	100	670	—
Perchloromethyl mercaptan	594–42–3	0.1	0.8	—
Perchloryl fluoride	7616–94–6	3	13.5	—

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [b]	mg/m³[b] [c]	Skin Designation
Perlite	93763-70-3			
Total dust		—	15	—
Respirable fraction		—	5	—
Petroleum distillates (Naphtha)(Rubber Solvent)			A[3]	—
Phenol	108-95-2	5	19	X
p-Phenylene diamine	106-50-3	—	0.1	X
Phenyl ether, vapor	101-84-8	1	7	—
Phenyl ether-biphenyl mixture, vapor		1	7	—
Phenylethylene; see Styrene.				
Phenyl glycidyl ether (PGE)	122-60-1	10	60	—
Phenylhydrazine	100-63-0	5	22	X
Phosdrin (Mevinphos)	7786-34-7	—	0.1	X
Phosgene (Carbonyl chloride)	75-44-5	0.1	0.4	—
Phosphine	7803-51-2	0.3	0.4	—
Phosphoric acid	7664-38-2	—	1	—
Phosphorus (yellow)	7723-14-0	—	0.1	—
Phosphorus pentachloride	10026-13-8	—	1	—
Phosphorus pentasulfide	1314-80-3	—	1	—
Phosphorus trichloride	7719-12-2	0.5	3	—
Phthalic anhydride	85-44-9	2	12	—
Picloram	1918-02-1			
Total dust		—	15	—
Respirable fraction		—	5	—
Picric acid	88-89-1	—	0.1	—
Piperazine dihydrochloride	142-64-3	—	—	X
Pindone (2-Pivalyl-1,3-indandione)	83-26-1	—	0.1	—
Plaster of Paris	26499-65-0			
Total dust		—	15	—
Respirable fraction		—	5	—
Platinum (as Pt)	7440-06-4			
Metal		—	—	—
Soluble salts		—	0.002	—
Polytetrafluoroethylene decomposition products			A[2]	
Portland cement	65997-15-1			
Total dust		15	—	10
Respirable fraction		5	—	—
Propargyl alcohol	107-19-7	1	—	X
beta-Propriolactone; see § 1915.1013	57-57-8			
Propionic acid	79-09-4	—	—	—
n-Propyl acetate	109-60-4	200	840	—
n-Propyl alcohol	71-23-8	200	500	—
n-Propyl nitrate	627-13-4	25	110	—
Propylene dichloride	78-87-5	75	350	—
Propylene imine	75-55-8	2	5	X
Propylene oxide	75-56-9	100	240	—
Propyne; see Methyl acetylene.				
Pyrethrum	8003-34-7	—	5	—
Pyridine	110-86-1	5	15	—
Quinone	106-51-4	0.1	0.4	—
RDX; see Cyclonite.				
Rhodium (as Rh), metal fume and insoluble compounds	7440-16-6	—	0.1	—
Rhodium (as Rh), soluble compounds	7440-16-6	—	0.001	—
Ronnel	299-84-3	—	10	—
Rotenone	83-79-4	—	5	—
Rouge		—		
Total dust		—	15	—
Respirable fraction		—	5	—
Selenium compounds (as Se)	7782-49-2	—	0.2	—
Selenium hexafluoride (as Se)	7783-79-1	0.05	0.4	—
Silica, amorphous, precipitated and gel	112926-00-8	([2])	([2])	([2])
Silica, amorphous, diatomaceous earth, containing less than 1% crystalline silica	61790-53-2	([2])	([2])	([2])
Silica, crystalline cristobalite, respirable dust	14464-46-1	([2])	([2])	([2])
Silica, crystalline quartz, respirable dust	14808-60-7	([2])	([2])	([2])
Silica, crystalline tripoli (as quartz), respirable dust	1317-95-9	([2])	([2])	([2])
Silica, crystalline tridymite, respirable dust	15468-32-3	([2])	([2])	([2])
Silica, fused, respirable dust	60676-86-0	([2])	([2])	([2])
Silicates (less than 1% crystalline silica).				
Mica (respirable dust)	12001-26-2	([2])	([2])	([2])
Soapstone, total dust	—	([2])	([2])	([2])
Soapstone, respirable dust	—	([2])	([2])	([2])

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] *	mg/m[3][b] *	Skin Designation
Talc (containing asbestos)	—	(3)	(3)	(3)
Talc (containing no asbestos), respirable dust	14807-96-6	(2)	(2)	(2)
Tremolite, asbestiform		(3)	(3)	(3)
Silicon	7440-21-3			
Total dust		—	15	—
Respirable fraction		—	5	—
Silicon carbide	409-21-2			
Total dust		—	15	—
Respirable fraction		—	5	—
Silver, metal and soluble compounds (as Ag)	7440-22-4	—	0.01	—
Soapstone; see Silicates				
Sodium fluoroacetate	62-74-8	—	0.05	X
Sodium hydroxide	1310-73-2	—	2	—
Starch	9005-25-8			
Total dust		—	15	—
Respirable fraction		—	5	—
Stibine	7803-52-3	0.1	0.5	—
Stoddard solvent	8052-41-3	200	1150	—
Strychnine	57-24-9	—	0.15	—
Styrene	100-42-5	100	420	50
Sucrose	57-50-1			
Total dust		—	15	—
Respirable fraction		—	5	—
Sulfur dioxide	7446-09-5	5	13	—
Sulfur hexafluoride	2551-62-4	1000	6000	—
Sulfuric acid	7664-93-9	—	1	—
Sulfur monochloride	10025-67-9	1	6	—
Sulfur pentafluoride	5714-22-7	0.025	0.25	—
Sulfuryl fluoride	2699-79-8	5	20	—
Systox, see Demeton				
2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	93-76-5	—	10	—
Talc; see Silicates—.				
Tantalum, metal and oxide dust	7440-25-7	—	5	—
TEDP (Sulfotep)	3689-24-5	—	0.2	X
Teflon decomposition products			A2	
Tellurium and compounds (as Te)	13494-80-9	—	0.1	—
Tellurium hexafluoride (as Te)	7783-80-4	0.02	0.2	—
Temephos	3383-96-8			
Total dust		—	15	—
Respirable fraction		—	5	—
TEPP (Tetraethyl pyrophosphate)	107-49-3	—	0.05	X
Terphenyls	26140-60-3	(C)1	(C)9	—
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	500	4170	—
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	500	4170	—
1,1,2,2-Tetrachloroethane	79-34-5	5	35	X
Tetrachloroethylene; see Perchloroethylene.				
Tetrachloromethane; see Carbon tetrachloride				
Tetrachloronaphthalene	1335-88-2	—	2	X
Tetraethyl lead (as Pb)	78-00-2	—	0.1	X
Tetrahydrofuran	109-99-9	200	590	—
Tetramethyl lead, (as Pb)	75-74-1	—	0.15	X
Tetramethyl succinonitrile	3333-52-6	0.5	3	X
Tetranitromethane	509-14-8	1	8	—
Tetryl (2,4,6-Trinitrophenylmethylnitramine)	479-45-8	—	1.5	X
Thallium, soluble compounds (as Tl)	7440-28-0	—	0.1	X
4,4'-Thiobis (6-tert, Butyl-m-cresol)	96-69-5			
Total dust		—	15	—
Respirable fraction		—	5	—
Thiram	137-26-8	—	5	—
Tin, inorganic compounds (except oxides) (as Sn)	7440-31-5	—	2	—
Tin, organic compounds (as Sn)	7440-31-5	—	0.1	—
Tin oxide (as Sn)	21651-19-4	—	—	—
Total dust		—	15	—
Respirable fraction		—	5	—
Titanium dioxide	13463-67-7			
Total dust		—	15	—
Toluene	108-88-3	200	750	100
Toluene-2,4-diisocyanate (TDI)	584-84-9	(C)0.02	(C)0.14	—
o-Toluidine	95-53-4	5	22	X
Toxaphene; see Chlorinated camphene.				
Tremolite; see Silicates.				

Table Z—Shipyards—Continued

Substance	CAS No.[d]	ppm[a] [e]	mg/m³[b] [e]	Skin Designation
Tributyl phosphate	126-73-8	—	5	
1,1,1-Trichloroethane; see Methyl chloroform				
1,1,2-Trichloroethane	79-00-5	10	45	X
Trichloroethylene	79-01-6	100	535	
Trichloromethane; see Chloroform.				
Trichloronaphthalene	1321-65-9	—	5	X
1,2,3-Trichloropropane	96-18-4	50	300	—
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1000	7600	—
Triethylamine	121-44-8	25	100	—
Trifluorobromomethane	75-63-8	1000	6100	—
Trimethyl benzene	25551-13-7	25	120	
2,4,6-Trinitrophenyl; see Picric acid.				
2,4,6-Trinitrophenylmethylnitramine; see Tetryl.				
2,4,6-Trinitrotoluene (TNT)	118-96-7	—	1.5	X
Triorthocresyl phosphate	78-30-8	—	0.1	—
Triphenyl phosphate	115-86-6	—	3	—
Tungsten (as W)	7440-33-7			
Insoluble compounds		—	5	—
Soluble compounds		—	1	—
Turpentine	8006-64-2	100	560	
Uranium (as U)	7440-61-1			
Soluble compounds		—	0.2	—
Insoluble compounds		—	0.2	—
Vanadium	1314-62-1			
Respirable dust (as V_2O_5)		—	(C)0.5	
Fume (as V_2O_5)		—	(C)0.1	
Vegetable oil mist				
Total dust		—	15	—
Respirable fraction		—	5	
Vinyl benzene; see Styrene.				
Vinyl chloride; see § 1915.1017	75-01-4			
Vinyl cyanide; see Acrylonitrile.				
Vinyl toluene	25013-15-4	100	480	—
Warfarin	81-81-2	—	0.1	—
Xylenes (o-, m-, p-isomers)	1330-20-7	100	435	—
Xylidine	1300-73-8	5	25	X
Yttrium	7440-65-5	—	1	—
Zinc chloride fume	7646-85-7	—	1	—
Zinc oxide fume	1314-13-2	—	5	
Zinc oxide	1314-13-2			
Total dust		—	15	—
Respirable fraction		—	5	—
Zinc stearate	557-05-1			
Total dust		—	15	—
Respirable fraction		—	5	—
Zirconium compounds (as Zr)	7440-67-7	—	[c]	

MINERAL DUSTS

Substance	mppcf[(j)]
SILICA:	
Crystalline	
Quartz. Threshold Limit calculated from the formula	250[(k)]
	$\%SiO_2+5$
Cristobalite.	
Amorphous, including natural diatomaceous earth	20
SILICATES (less than 1% crystalline silica)	
Mica	20
Portland cement	50
Soapstone	20
Talc (non-asbestiform)	20
Talc (fibrous), use asbestos limit	--

MINERAL DUSTS—Continued

Substance	mppcf[(j)]
Graphite (natural)	15
Inert or Nuisance Particulates:[(m)]	50 (or 15 mg/m³ whichever is the smaller) of total dust <1% SiO_2

Conversion factors.
mppcf × 35.3 = million particles per cubic meter = particles per c.c.

Footnotes to Table Z—Shipyards:

[1] [Reserved]

[2] See Mineral Dusts Table.

[3] Use Asbestos Limit § 1915.1001.

[4] See 1915.1001.

[e] The PELs are 8-hour TWAs unless otherwise noted; a (C) designation denotes a ceiling limit. They are to be determined from breathing-zone air samples.

[a] Parts of vapor or gas per million parts of contaminated air by volume at 25°C and 760 torr.

[b] Milligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.

[c] [Reserved]

[d]The CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given--not CAS numbers for the individual compounds.

[e-f][Reserved]

[g]For sectors excluded from § 1915.1028 the limit is 10 ppm TWA.

[h]Where OSHA has published a proposal for a substance but has not issued a final rule, the proposal is referenced and the existing limit is published.

[i][Reserved]

[j]Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

[k]The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

[m]Covers all organic and inorganic particulates not otherwise regulated. Same as Particulates Not Otherwise Regulated.

The 1970 TLV uses letter designations instead of a numerical value as follows:

A[1] [Reserved]

A[2] Polytetrafluoroethylene decomposition products. Because these products decompose in part by hydrolysis in alkaline solution, they can be quantitatively determined in air as fluoride to provide an index of exposure. No TLV is recommended pending determination of the toxicity of the products, but air concentrations should be minimal.

A[3] Gasoline and/or Petroleum Distillates. The composition of these materials varies greatly and thus a single TLV for all types of these materials is no longer applicable. The content of benzene, other aromatics and additives should be determined to arrive at the appropriate TLV.

E Simple asphyxiants. The limiting factor is the available oxygen which shall be at least 18% and be within the requirement addressing explosion in subpart B of part 1915.

§ 1915.1001 Asbestos.

(a) *Scope and application.* (1) This section applies to all occupational exposures to asbestos in all industries covered by the Occupational Safety and Health Act, except as provided in paragraph (a)(2) of this section.

(2) This section does not apply to construction work as defined in 29 CFR 1910.12(b). [Exposure to asbestos in construction work is covered by 29 CFR 1926.58.]

(b) *Definitions. Action level* means an airborne concentration of asbestos, of 0.1 fiber per cubic centimeter (f/cc) of air calculated as an eight (8)—hour time-weighted average.

Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person authorized by the employer and required by work duties to be present in regulated areas.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Employee exposure means that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Fiber means a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

High-efficiency particulate air (HEPA) filter means a filter capable of trapping and retaining at least 99.97 percent of 0.3 micrometer diameter mono-disperse particles.

Regulated area means an area established by the employer to demarcate areas where airborne concentrations of asbestos exceed, or can reasonably be expected to exceed, the permissible exposure limit.

(c) *Permissible exposure limits (PELS)*—(1) *Time-weighted average limit (TWA).* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.2 fiber per cubic centimeter of air as an eight (8)-hour time-weighted average (TWA) as determined by the method prescribed in Appendix A of this section, or by an equivalent method.

(2) *Excursion limit.* The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

(d) *Exposure monitoring*—(1) *General.* (i) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee.

(ii) Representative 8-hour TWA employee exposures shall be determined on the basis of one or more samples representing full-shift exposures for each shift for each employee in each job classification in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30 minute exposures associated with operations that are most likely to produce exposures above the excursion limit for each shift for each job classification in each work area.

(2) *Initial monitoring.* (i) Each employer who has a workplace or work operation covered by this standard, except as provided for in paragraphs (d)(2)(ii) and (d)(2)(iii) of this section, shall perform initial monitoring of employees who are, or may reasonably be expected to be exposed to airborne concentrations at or above the action level and/or excursion limit.

(ii) Where the employer has monitored after December 20, 1985, for the TWA and after March 14, 1988, for the excursion limit, and the monitoring satisfies all other requirements of this section, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (d)(2)(i) of this section.

(iii) Where the employer has relied upon objective data that demonstrates that asbestos is not capable of being released in airborne concentrations at or above the action level and/or excursion limit under the expected conditions of processing, use, or handling, then no initial monitoring is required.

(3) *Monitoring frequency (periodic monitoring) and patterns.* After the initial determinations required by paragraph (d)(2)(i) of this section, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than six months for employees whose exposures may reasonably be foreseen to exceed the action level and/or excursion limit.

(4) *Changes in monitoring frequency* If either the initial or the periodic monitoring required by paragraphs (d)(2) and (d)(3) of this section statistically indicates that employee exposures are below the action level and/or excursion limit, the employer may discontinue the monitoring for those employees whose exposures are represented by such monitoring.

(5) *Additional monitoring.* Notwithstanding the provisions of paragraphs (d)(2)(ii) and (d)(4) of this section, the employer shall institute the exposure monitoring required under paragraphs (d)(2)(i) and (d)(3) of this section whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new or additional exposures above the action level and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the action level and/or excursion limit.

(6) *Method of monitoring.* (i) All samples taken to satisfy the monitoring requirements of paragraph (d) shall be personal samples collected following the procedures specified in Appendix A.

(ii) All samples taken to satisfy the monitoring requirements of paragraph (d) shall be evaluated using the OSHA

Reference Method (ORM) specified in Appendix A of this section, or an equivalent counting method.

(iii) If an equivalent method to the ORM is used, the employer shall ensure that the method meets the following criteria:

(A) Replicate exposure data used to establish equivalency are collected in side-by-side field and laboratory comparisons; and

(B) The comparison indicates that 90% of the samples collected in the range 0.5 to 2.0 times the permissible limit have an accuracy range of plus or minus 25 percent of the ORM results with a 95% confidence level as demonstrated by a statistically valid protocol; and

(C) The equivalent method is documented and the results of the comparison testing are maintained.

(iv) To satisfy the monitoring requirements of paragraph (d) of this section, employers must use the results of monitoring analysis performed by laboratories which have instituted quality assurance programs that include the elements as prescribed in Appendix A.

(7) *Employee notification of monitoring results.* (i) The employer shall, within 15 working days after the receipt of the results of any monitoring performed under the standard, notify the affected employees of these results in writing either either individually or by posting of results in an appropriate location that is accessible to affected employees.

(ii) The written notification required by paragraph (d)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce employee exposure to or below the TWA and/or excursion limit, wherever monitoring results indicated that the TWA and/or excursion limit had been exceeded.

(e) *Regulated Areas*—(1) *Establishment.* The employer shall establish regulated areas wherever airborne concentrations of asbestos are in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

(2) *Demarcation.* Regulated areas shall be demarcated from the rest of the workplace in any manner that minimizes the number of persons who will be exposed to asbestos.

(3) *Access.* Access to regulated areas shall be limited to authorized persons or to persons authorized by the Act or regulations issued pursuant thereto.

(4) *Provision of respirators.* Each person entering a regulated area shall be supplied with and required to use a respirator, selected in accordance with paragraph (g)(2) of this section.

(5) *Prohibited activities.* The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated areas.

(f) *Methods of compliance*—(1) *Engineering controls and work practices.* (i) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to or below the TWA and/or excursion limit, prescribed in paragraph (c) of this section, except to the extent that such controls are not feasible.

(ii) Wherever the feasible engineering controls and work practices that can be instituted are not sufficient to reduce employee exposure to or below the TWA and/or excursion limit prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (g) of this section.

(iii) For the following operations, wherever feasible engineering controls and work practices that can be instituted are not sufficient to reduce the employee exposure to or below the TWA and/or excursion limit, prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to or below 0.5 fiber per cubic centimeter of air (as an eight-hour time-weighted average) or 2.5 fibers/cc for 30 minutes (short-term exposure) and shall supplement them by the use of any combination of respiratory protection that complies with the requirements of paragraph (g) of this section, work practices and feasible engineering controls that will reduce employee exposure to or below the TWA and to or below the excursion limit prescribed in paragraph (c) of this section: Coupling cutoff in primary asbestos cement pipe manufacturing; sanding in primary and secondary asbestos cement sheet manufacturing; grinding in primary and secondary friction product manufacturing; carding and spinning in dry textile processes; and grinding and sanding in primary plastics manufacturing.

(iv) Local exhaust ventilation. Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with good practices such as those found in the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2–1979.

(v) *Particular tools.* All hand-operated and power-operated tools with would produce or release fibers of asbestos so as to expose employees to levels in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section, such as, but not limited to saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems which comply with paragraph (f)(1)(iv) of this section.

(vi) *Wet methods.* Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers so as to expose employees to levels in excess of the TWA and/or excursion limit, prescribed in paragraph (c) of this section, unless the usefulness of the product would be diminished thereby.

(vii) [Reserved]

(viii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne fibers of asbestos so as to expose employees to levels in excess of the TWA and/or excursion limit prescribed in paragraph (c) of this section.

(ix) *Compressed air.* Compressed air shall not be used to remove asbestos or materials containing asbestos, unless the compressed air is used in conjunction with a ventilation system designed to capture the dust cloud created by the compressed air.

(2) *Compliance program.* (i) Where the TWA and/or excursion limit is exceeded, the employer shall establish and implement a written program to reduce employee exposure to or below the TWA and to or below the excursion limit by means of engineering and work practice controls as required by paragraph (f)(1) of this section, and by the use of respiratory protection where required or permitted under this section.

(ii) Such programs shall be reviewed and updated as necessary to reflect significant changes in the status of the employer's compliance program.

(iii) Written programs shall be submitted upon request for examination and copying to the Assistant Secretary, the Director, affected employees and designated employee representatives.

(iv) The employer shall not use employee rotation as a means of compliance with the TWA and/or excursion limit.

(g) *Respiratory protection*—(1) *General.* The employer shall provide respirators, and ensure that they are used, where required by this section. Respirators shall be used in the following circumstances:

(i) During the interval necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations, such as maintenance and repair activities, or other activities for which engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the TWA and/or excursion limit; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1. The employer shall select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

(ii) The employer shall provide a powered, air-purifying respirator in lieu of any negative pressure respirator specified in Table 1 whenever:

(A) An employee chooses to use this type of respirator; and

(B) This respirator will provide adequate protection to the employee.

TABLE 1—RESPIRATORY PROTECTION FOR ASBESTOS FIBERS

Airborne concentration of asbestos	Required respirator
Not in excess of 2 f/cc (10 X PEL).	1. Half-mask air-purifying respirator, other than a disposable respirator, equipped with high-efficiency filters.
Not in excess of 10 f/cc (50 X PEL).	1. Full facepiece air-purifying respirator equipped with high-efficiency filters.
Not in excess of 20 f/cc (100 X PEL).	1. Any powered air-purifying respirator equipped with high-efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc (1000 X PEL).	1. Full facepiece supplied-air respirator operated in pressure demand mode.

TABLE 1—RESPIRATORY PROTECTION FOR ASBESTOS FIBERS—Continued

Airborne concentration of asbestos	Required respirator
Greater than 200 f/cc (> 1,000 X PEL) or unknown concentration.	1. Full facepiece supplied air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

NOTE: a. Respirators assigned for higher environmental concentrations may be used at lower concentrations.

b. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers or larger.

(3) *Respirator program.* (i) Where respiratory protection is required, the employer shall institute a respirator program in accordance with 29 CFR 1910.134(b), (d), (e), and (f).

(ii) The employer shall permit each employee who uses a filter respirator to change the filter elements whenever an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.

(iii) Employees who wear respirators shall, be permitted to leave the regulated area to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

(iv) No employee shall be assigned to tasks requiring the use of respirators if, based upon his or her most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator. Such employee shall be assigned to another job or given the opportunity to transfer to a different position whose duties he or she is able to perform with the same employer, in the same geographical area and with the same seniority, status, and rate of pay the employee had just prior to such transfer, if such a different position is available.

(4) *Respirator fit testing.* (i) The employer shall ensure that the respirator issued to the employee exhibits the least possible facepiece leakage and that the respirator is fitted properly.

(ii) For each employee wearing negative pressure respirators, employers shall perform either quantitative or qualitative face fit tests at the time of initial fitting and at least every six months thereafter. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, and shall be conducted in accordance with Appendix C. The tests shall be used to select facepieces that provide the required protection as prescribed in Table I.

(h) *Protective work clothing and equipment*—(1) *Provision and use.* If an employee is exposed to asbestos above the TWA and/or excursion limit, or where the possibility of eye irritation exists, the employer shall provide at no cost to the employee and ensure that the employee uses appropriate work clothing and equipment such as, but not limited to:

(i) Coveralls or similar full-body work clothing;

(ii) Gloves, head coverings, and foot coverings; and

(iii) Face shields, vented goggles, or other appropriate protective equipment which complies with § 1910.133 of this title.

(2) *Removal and storage.* (i) The employer shall ensure that employees remove work clothing contaminated with asbestos only in change rooms provided in accordance with paragraph (i)(1) of this section.

(ii) The employer shall ensure that no employee takes contaminated work clothing out of the change room, except those employees authorized to do so for the purpose of laundering, maintenance, or disposal.

(iii) Contaminated work clothing shall be placed and stored in closed containers which prevent dispersion of the asbestos outside the container.

(iv) Containers of contaminated protective devices or work clothing which are to be taken out of change rooms or the workplace for cleaning, maintenance or disposal, shall bear labels in accordance with paragraph (j)(2) of this section.

(3) *Cleaning and replacement.* (i) The employer shall clean, launder, repair, or replace protective clothing and equipment required by this paragraph to maintain their effectiveness. The employer shall provide clean protective clothing and equipment at least weekly to each affected employee.

(ii) The employer shall prohibit the removal of asbestos from protective clothing and equipment by blowing or shaking.

(iii) Laundering of contaminated clothing shall be done so as to prevent the release of airborne fibers of asbestos in excess of the permissible exposure limits prescribed in paragraph (c) of this section.

(iv) Any employer who gives contaminated clothing to another person for laundering shall inform such person of the requirement in paragraph

(h)(3)(iii) of this section to effectively prevent the release of asbestos in excess of the permissible exposure limits.

(v) The employer shall inform any person who launders or cleans protective clothing or equipment contaminated with asbestos of the potentially harmful effects of exposure to asbestos.

(vi) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (j) of this seciton.

(i) *Hygiene facilities and practices*—(1) *Change rooms.* (i) The employer shall provide clean change rooms for employees who work in areas where their airborne exposure to asbestos is above the TWA and/or excursion limit.

(ii) The employer shall ensure that change rooms are in accordance with § 1910.141(e) of this title, and are equipped with two separate lockers or storage facilities, so separated as to prevent contamination of the employee's street clothes from his protective work clothing and equipment.

(2) *Showers.* (i) The employer shall ensure that employees who work in areas where their airborne exposure is above the TWA and/or excursion limit shower at the end of the work shift.

(ii) The employer shall provide shower facilities which comply with § 1910.141(d)(3) of this title.

(iii) The employer shall ensure that employees who are required to shower pursuant to paragraph (i)(2)(i) of this section do not leave the workplace wearing any clothing or equipment worn during the work shift.

(3) *Lunchrooms.* (i) The employer shall provide lunchroom facilities for employees who work in areas where their airborne exposure is above the TWA and/or excursion limit.

(ii) The employer shall ensure that lunchroom facilities have a positive pressure, filtered air supply, and are readily accessible to employees.

(iii) The employer shall ensure that employees who work in areas where their airborne exposure is above the TWA and/or excursion limit wash their hands and faces prior to eating, drinking or smoking.

(iv) The employer shall ensure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface asbestos fibers have been removed from the clothing or equipment by vacuuming or other method that removes dust without causing the asbestos to become airborne.

(4) *Smoking in work areas.* The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that work area.

(j) *Communication of hazards to employees*—(1) *Warning signs.* (i) Posting. Warning signs shall be provided and displayed at each regulated area. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the signs and take necessary protective steps before entering the area.

(ii) Sign specifications. The warning signs required by paragraph (j)(1)(i) of this section shall bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE
HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING
ARE REQUIRED IN THIS AREA

(iii) [Reserved]

(iv) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (j)(1)(i) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

(2) *Warning labels.* (i) Labeling. Warning labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers.

(ii) Label specifications. The labels shall comply with the requirements of 29 CFR 1915.1200(f) of OSHA's Hazard Communication standard, and shall include the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE
HAZARD

(3) *Material safety data sheets.* Employers who are manufacturers or importers of asbestos or asbestos products shall comply with the requirements regarding development of material safety data sheets as specified in 29 CFR 1915.1200(g) of OSHA's Hazard Communication standard, except as provided by paragraph (j)(4) of this section.

(4) The provisions for labels required by paragraph (j)(2) or for material safety data sheets required by paragraph (j)(3) do not apply where:

(i) Asbestos fibers have been modified by a bonding agent, coating, binder, or other material provided that the manufacturer can demonstrate that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of fibers of asbestos in excess of the action level and/or excursion limit will be released or

(ii) Asbestos is present in a product in concentrations less than 0.1%.

(5) *Employee information and training.* (i) The employer shall institute a training program for all employees who are exposed to airborne concentrations of asbestos at or above the action level and/or excursion limit and ensure their participation in the program.

(ii) Training shall be provided prior to or at the time of initial assignment and at least annually thereafter.

(iii) The training program shall be conducted in a manner which the employee is able to understand. The employer shall ensure that each employee is informed of the following:

(A) The health effects associated with asbestos exposure;

(B) The relationship between smoking and exposure to asbestos in producing lung cancer:

(C) The quantity, location, manner of use, release, and storage of asbestos, and the specfic nature of operations which could result in exposure to asbestos;

(D) The engineering controls and work practices associated with the employee's job assignment;

(E) The specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures, and personal protective equipment to be used;

(F) The purpose, proper use, and limitations of respirators and protective clothing;

(G) The purpose and a description of the medical surveillance program required by paragraph (l) of this section;

(H) The content of this standard, including appendices.

(I) The names, addresses and phone numbers of public health organizations which provide information, materials, and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in Appendix I, to comply with this requirement.

(J) The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

(iv) Access to information and training materials.

(A) The employer shall make a copy of this standard and its appendices readily available without cost to all affected employees.

(B) The employer shall provide, upon request, all materials relating to the employee information and training program to the Assistant Secretary and

the training program to the Assistant Secretary and the Director.

(C) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NIH Publication No. 89–1647, or equivalent self-help material, which is approved or published by a public health organization listed in appendix I.

(k) *Housekeeping.* (1) All surfaces shall be maintained as free as practicable of accumulations of dusts and waste containing asbestos.

(2) All spills and sudden releases of material containing asbestos shall be cleaned up as soon as possible.

(3) Surfaces contaminated with asbestos may not be cleaned by the use of compressed air.

(4) Vacuuming. HEPA-filtered vacuuming equipment shall be used for vacuuming. The equipment shall be used and emptied in a manner which minimizes the reentry of asbestos into the workplace.

(5) Shoveling, dry sweeping and dry clean-up of asbestos may be used only where vacuuming and/or wet cleaning are not feasible.

(6) Waste disposal. Waste, scrap, debris, bags, containers, equipment, and clothing contaminated with asbestos consigned for disposal, shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(l) *Medical surveillance*—(1) *General.* (i) The employer shall institute a medical surveillance program for all employees who are or will be exposed to airborne concentrations of asbestos at or above the action level and/or excursion limit.

(ii) *Examination by a physician.* (A) The employer shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee and at a reasonable time and place.

(B) Persons other than licensed physicians, who administer the pulmonary function testing required by this section, shall complete a training course in spirometry sponsored by an appropriate academic or professional institution.

(2) *Preplacement examinations.* (i) Before an employee is assigned to an occupation exposed to airborne concentrations of asbestos fibers, a preplacement medical examination shall be provided or made available by the employer.

(ii) Such examination shall include, as a minimum, a medical and work history; a complete physical examination of all systems with emphasis on the respiratory system, the cardiovascular system and digestive tract; completion of the respiratory disease standardized questionnaire in Appendix D, Part 1; a chest roentgenogram (posterior-anterior 14x17 inches); pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$); and any additional tests deemed appropriate by the examining physician. Interpretation and classification of chest roentgenograms shall be conducted in accordance with Appendix E.

(3) *Periodic examinations.* (i) Periodic medical examinations shall be made available annually.

(ii) The scope of the medical examination shall be in conformance with the protocol established in paragraph (l)(2)(ii) of this section, except that the frequency of chest roentgenograms shall be conducted in accordance with Table 2, and the abbreviated standardized questionnaire contained in Appendix D, Part 2, shall be administered to the employee.

TABLE 2—FREQUENCY OF CHEST ROENTGENOGRAMS

Years since first exposure	Age of employee		
	15 to 35	35+ to 45	45+
0 to 10	Every 5 years	Every 5 years	Every 5 years.
10+	Every 5 years	Every 2 years	Every 1 year.

(4) *Termination of employment examinations.* (i) The employer shall provide, or make available, a termination of employment medical examination for any employee who has been exposed to airborne concentrations of fibers of asbestos at or above the action level and/or excursion limit.

(ii) The medical examination shall be in accordance with the requirements of the periodic examinations stipulated in paragraph (l)(3) of this section, and shall be given within 30 calendar days before or after the date of termination of employment.

(5) *Recent examinations.* No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with any of the preceding paragraphs [(l)(2)–(l)(4)] within the past 1 year period.

(6) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this standard and Appendices D and E.

(ii) A description of the affected employee's duties as they relate to the employee's exposure.

(iii) The employee's representative exposure level or anticipated exposure level.

(iv) A description of any personal protective and respiratory equipment used or to be used.

(v) Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

(7) *Physician's written opinion.* (i) The employer shall obtain a written signed opinion from the examining physician. This written opinion shall contain the results of the medical examination and shall include:

(A) The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos;

(B) Any recommended limitations on the employee or upon the use of personal protective equipment such as clothing or respirators; and

(C) A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions resulting from asbestos exposure that require further explanation or treatment.

(D) A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

(ii) The employer shall instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.

(iii) The employer shall provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

(m) *Recordkeeping*—(1) *Exposure measurements.* (i) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed in paragraph (d) of this section.

(ii) This record shall include at least the following information:

(A) The date of measurement;

(B) The operation involving exposure to asbestos which is being monitored;

(C) Sampling and analytical methods used and evidence of their accuracy;

(D) Number, duration, and results of samples taken;

(E) Type of respiratory protective devices worn, if any; and

(F) Name, social security number and exposure of the employees whose exposure are represented.

(iii) The employer shall maintain this record for at least thirty (30) years, in accordance with 29 CFR 1915.1120.

(2) *Objective data for exempted operations.* (i) Where the processing, use, or handling of products made from or containing asbestos is exempted from other requirements of this section under paragraph (d)(2)(iii) of this section, the employer shall establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

(ii) The record shall include at least the following:

(A) The product qualifying for exemption;

(B) The source of the objective data;

(C) The testing protocol, results of testing, and/or analysis of the material for the release of asbestos;

(D) A description of the operation exempted and how the data support the exemption; and

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

Note: The employer may utilize the services of competent organizations such as industry trade associations and employee associations to maintain the records required by this section.

(3) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (l)(1)(i) of this section, in accordance with 29 CFR 1915.1120.

(ii) The record shall include at least the following information:

(A) The name and social security number of the employee;

(B) Physician's written opinions;

(C) Any employee medical complaints related to exposure to asbestos; and

(D) A copy of the information provided to the physician as required by paragraph (l)(6) of this section.

(iii) The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR 1915.1120.

(4) *Training.* The employer shall maintain all employee training records for one (1) year beyond the last date of employment of that employee.

(5) *Availability.* (i) The employer, upon written request, shall make all records required to be maintained by this section available to the Assistant Secretary and the Director for examination and copying.

(ii) The employer, upon request shall make any exposure records required by paragraph (m)(1) of this section available for examination and copying to affected employees, former employees, designated representatives and the Assistant Secretary, in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i).

(iii) The employer, upon request, shall make employee medical records required by paragraph (m)(2) of this section available for examination and copying to the subject employee, to anyone having the specific written consent of the subject employee, and the Assistant Secretary, in accordance with 29 CFR 1915.1120.

(6) *Transfer of records.* (i) The employer shall comply with the requirements concerning transfer of records set forth in 29 CFR 1915.1120(h).

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director at least 90 days prior to disposal of records and, upon request, transmit them to the Director.

(n) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with paragraph (d) of this section.

(2) *Observation procedures.* When observation of the monitoring of employee exposure to asbestos requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(o) *Dates*—(1) *Effective date.* This standard shall become effective July 21, 1986. The requirements in the amended paragraphs in this section which pertain only to or are triggered by the excursion limit shall become effective October 14, 1988.

(2) *Start-up dates.* All obligations of this standard commence on the effective date except as follows:

(i) *Exposure monitoring.* Initial monitoring required by paragraph (d)(2) of this section shall be completed as soon as possible but no later than October 20, 1986.

(ii) *Regulated areas.* Regulated areas required to be established by paragraph (e) of this section as a result of initial monitoring shall be set up as soon as possible after the results of that monitoring are known and not later than November 17, 1986.

(iii) *Respiratory protection.* Respiratory protection required by paragraph (g) of this section shall be provided as soon as possible but no later than the following schedule:

(A) Employees whose 8-hour TWA exposure exceeds 2 fibers/cc—July 21, 1986.

(B) Employees whose 8-hour TWA exposure exceeds the PEL but is less than 2 fibers/cc—November 17, 1986.

(C) Powered air-purifying respirators provided under paragraph (g)(2)(ii)—January 16, 1987.

(iv) *Hygiene and lunchroom facilities.* Construction plans for changerooms, showers, lavatories, and lunchroom facilities shall be completed no later than January 16, 1987; and these facilities shall be constructed and in use no later than July 20, 1987. However, if as part of the compliance plan it is predicted by an independent engineering firm that engineering controls and work practices will reduce exposures below the permissible exposure limit by July 20, 1988, for affected employees, then such facilities need not be completed until 1 year after the engineering controls are completed, if such controls have not in fact succeeded in reducing exposure to below the permissible exposure limit.

(v) *Employee information and training.* Employee information and training required by paragraph (j)(5) of this section shall be provided as soon as

possible but no later than October 20, 1986.

(vi) *Medical surveillance.* Medical examinations required by paragraph (l) of this section shall be provided as soon as possible but no later than November 17, 1986.

(vii) *Compliance program.* Written compliance programs required by paragraph (f)(2) of this section as a result of initial monitoring shall be completed and available for inspection and copying as soon as possible but no later than July 20, 1987.

(viii) *Methods of compliance.* The engineering and work practice controls as required by paragraph (f)(1) shall be implemented as soon as possible but no later than July 20, 1988.

(3) *Start-up dates for excursion limit.* Compliance with the excursion limit requirements in this section shall be as follows:

(i) Paragraphs (c), (d), (e), (g), (h), (j), (k), (l), (m) of this section, shall be complied with by December 13, 1988.

(ii) Paragraph (f) of this section, shall be complied with by March 13, 1989.

(iii) Paragraph (i) of this section, shall be complied with by September 14, 1989.

(4) *Compliance date.* The requirements of paragraphs (i)(4), (j)(l)(iv), (j)(5)(iii)(I), (j)(5)(iii)(J), (j)(5)(iv)(C), and (l)(7)(i)(D) shall be complied with by May 7, 1990.

(p) *Appedices.* (1) Appendices A, C, D, and E to this section are incorporated as part of this section and the contents of these Appendices are mandatory.

(2) Appendices B, F, G, H, and I to this section are informational and are not intended to create any additional obligation not otherwise imposed or to detract from any existing obligation.

Appendix A to § 1915.1001—OSHA Reference Method—Mandatory

This mandatory appendix specifies the procedure for analyzing air samples for asbestos and specifies quality control procedures that must be implemented by laboratories performing the analysis. The sampling and analytical methods described below represent the elements of the available monitoring methods (such as the NIOSH 7400 method) which OSHA considers to be essential to achieve adequate employee exposure monitoring while allowing employers to use methods that are already established within their organizations. All employers who are required to conduct air monitoring under paragraph (d) of the standard are required to utilize analytical laboratories that use this procedure, or an equivalent method, for collecting and analyzing samples.

Sampling and Analytical Procedure

1. The sampling medium for air samples shall be mixed cellulose ester filter membranes. These shall be designated by the manufacturer as suitable for asbestos counting. See below for rejection of blanks.

2. The preferred collection device shall be the 25-mm diameter cassette with an open-faced 50-mm electrically conductive extension cowl. The 37-mm cassette may be used if necessary but only if written justification for the need to use the 37-mm filter cassette accompanies the sample results in the employee's exposure monitoring record.

3. An air flow rate between 0.5 liter/min and 2.5 liters/min shall be selected for the 25-mm cassette. If the 37-mm cassette is used, an air flow rate between 1 liter/min and 2.5 liters/min shall be selected.

4. Where possible, a sufficient air volume for each air sample shall be collected to yield between 100 and 1,300 fibers per square millimeter on the membrane filter. If a filter darkens in appearance or if loose dust is seen on the filter, a second sample shall be started.

5. Ship the samples in a rigid container with sufficient packing material to prevent dislodging the collected fibers. Packing material that has a high electrostatic charge on its surface (e.g., expanded polystyrene) cannot be used because such material can cause loss of fibers to the sides of the cassette.

6. Calibrate each personal sampling pump before and after use with a representative filter cassette installed between the pump and the calibration devices.

7. Personal samples shall be taken in the "breathing zone" of the employee (i.e., attached to or near the collar or lapel near the worker's face).

8. Fiber counts shall be made by positive phase contrast using a microscope with an 8 to 10 X eyepiece and a 40 to 45 X objective for a total magnification of approximately 400 X and a numerical aperture of 0.65 to 0.75. The microscope shall also be fitted with a green or blue filter.

9. The microscope shall be fitted with a Walton-Beckett eyepiece graticule calibrated for a field diameter of 100 micrometers (+/−2 micrometers).

10. The phase-shift detection limit of the microscope shall be about 3 degrees measured using the HSE phase shift test slide as outlined below.

a. Place the test slide on the microscope stage and center it under the phase objective.

b. Bring the blocks of grooved lines into focus.

Note: The slide consists of seven sets of grooved lines (ca. 20 grooves to each block) in descending order of visibility from sets 1 to 7, seven being the least visible. The requirements for asbestos counting are that the microscope optics must resolve the grooved lines in set 3 completely, although they may appear somewhat faint, and that the grooved lines in sets 6 and 7 must be invisible. Sets 4 and 5 must be at least partially visible but may vary slightly in visibility between microscopes. A microscope that fails to meet these requirements has either too low or too high a resolution to be used for asbestos counting.

c. If the image deteriorates, clean and adjust the microscope optics. If the problem persists, consult the microscope manufacturer.

11. Each set of samples taken will include 10 percent blanks or a minimum of 2 blanks. The blank results shall be averaged and subtracted from the analytical results before reporting. Any samples represented by a blank having a fiber count in excess of 7 fibers/100 fields shall be rejected.

12. The samples shall be mounted by the acetone/triacetin method or a method with an equivalent index of refraction and similar clarity.

13. Observe the following counting rules.

a. Count only fibers equal to or longer than 5 micrometers. Measure the length of curved fibers along the curve.

b. In the absence of other information, count all particles as asbesto that have a length-to-width ratio (aspect ratio) of 3:1 or greater.

c. Fibers lying entirely within the boundary of the Walton-Beckett graticule field shall receive a count of 1. Fibers crossing the boundary once, having one end within the circle, shall receive the count of one half (½). Do not count any fiber that crosses the graticule boundary more than once. Reject and do not count any other fibers even though they may be visible outside the graticule area.

d. Count bundles of fibers as one fiber unless individual fibers can be identified by observing both ends of an individual fiber.

e. Count enough graticule fields to yield 100 fibers. Count a minimum of 20 fields; stop counting at 100 fields regardless of fiber count.

14. Blind recounts shall be conducted at the rate of 10 percent.

Quality Control Procedures

1. Intralaboratory program. Each laboratory and/or each company with more than one microscopist counting slides shall establish a statistically designed quality assurance program involving blind recounts and comparisons between microscopists to monitor the variability of counting by each microscopist and between microscopists. In a company with more than one laboratory, the program shall include all laboratories and shall also evaluate the laboratory-to-laboratory variability.

2. Interlaboratory program. Each laboratory analyzing asbestos samples for compliance determination shall implement an interlaboratory quality assurance program that as a minimum includes participation of at least two other independent laboratories. Each laboratory shall participate in round robin testing at least once every 6 months with at least all the other laboratories in its interlaboratory quality assurance group. Each laboratory shall submit slides typical of its own work load for use in this program. The round robin shall be designed and results analyzed using appropriate statistical methodology.

3. All individuals performing asbestos analysis must have taken the NIOSH course for sampling and evaluating airborne asbestos dust or an equalivalent course.

4. When the use of different microscopes contributes to differences between counters and laboratories, the effect of the different microscope shall be evaluated and the microscope shall be replaced, as necessary

5. Current results of these quality assurance programs shall be posted in each laboratory to keep the microscopists informed.

Appendix B to § 1915.1001—Detailed Procedure for Asbestos Sampling and Analysis—Non-Mandatory

This appendix contains a detailed procedure for sampling and analysis and includes those critical elements specified in Appendix A. Employers are not required to use this procedure, but they are required to use Appendix A. The purpose of Appendix B is to provide a detailed step-by-step sampling and analysis procedure that conforms to the elements specified in Appendix A. Since this procedure may also standardize the analysis and reduce variability, OSHA encourages employers to use this appendix.

Asbestos Sampling and Analysis Method

Technique: Microscopy, Phase Contrast
Analyte: Fibers (manual count)
Sample Preparation: Acetone/triacetin method
Calibration: Phase-shift detection limit about 3 degrees
Range: 100 to 1300 fibers/mm ^{2} filter area
Estimated limit of detection: 7 fibers/mm ^{2} filter area
Sampler: Filter (0.8–1.2 um mixed cellulose ester membrane, 25-mm diameter)
Flow rate: 0.5 L/min to 2.5 L/min (25-mm cassette) 1.0 L/min to 2.5 L/min (37-mm cassette)
Sample volume: Adjust to obtain 100 to 1300 fibers/mm ^{2}
Shipment: Routine
Sample stability: Indefinite
Blanks: 10% of samples (minimum 2)
Standard analytical error: 0.25.

Applicability: The working range is 0.02 f/cc (1920–L air sample) to 1.25 f/cc (400–L air sample). The method gives an index of airborne asbestos fibers but may be used for other materials such as fibrous glass by inserting suitable parameters into the counting rules. The method does not differentiate between asbestos and other fibers. Asbestos fibers less than ca. 0.25 um diameter will not be detected by this method.

Interferences: Any other airborne fiber may interfere since all particles meeting the counting criteria are counted. Chainlike particles may appear fibrous. High levels of nonfibrous dust particles may obscure fibers in the field of view and raise the detection limit.

Reagents: 1. Acetone. 2. Triacetin (glycerol triacetate), reagent grade

Special precautions: Acetone is an extremely flammable liquid and precautions must be taken not to ignite it. Heating of acetone must be done in a ventilated laboratory fume hood using a flameless, spark-free heat source.

Equipment: 1. Collection device: 25-mm cassette with 50-mm electrically conductive extension cowl with cellulose ester filter, 0.8 to 1.2 mm pore size and backup pad.

Note: Analyze representative filters for fiber background before use and discard the filter lot if more than 5 fibers/100 fields are found.

2. Personal sampling pump, greater than or equal to 0.5 L/min. with flexible connecting tubing.

3. Microscope, phase contrast, with green or blue filter, 8 to 10X eyepiece, and 40 to 45X phase objective (total magnification ca 400X; numerical aperture = 0.65 to 0.75.

4. Slides, glass, single-frosted, pre-cleaned, 25 x 75 mm.

5. Cover slips, 25 x 25 mm, no. 1½ unless otherwise specified by microscope manufacturer.

6. Knife, No. 1 surgical steel, curved blade.

7. Tweezers.

8. Flask, Guth-type, insulated neck, 250 to 500 mL (with single-holed rubber stopper and elbow-jointed glass tubing, 16 to 22 cm long).

9. Hotplate, spark-free, stirring type; heating mantle; or infrared lamp and magnetic stirrer.

10. Syringe, hypodermic, with 22-gauge needle.

11. Graticule, Walton-Beckett type with 100 um diameter circular field at the specimen plane (area = 0.00785 mm ^{2}). (Type G–22).

Note: the graticule is custom-made for each microscope.

12. HSE/NPL phase contrast test slide, Mark II.

13. Telescope, ocular phase-ring centering.

14. Stage micrometer (0.01 mm divisions).

Sampling

1. Calibrate each personal sampling pump with a representative sampler in line.

2. Fasten the sampler to the worker's lapel as close as possible to the worker's mouth. Remove the top cover from the end of the cowl extension (open face) and orient face down. Wrap the joint between the extender and the monitor's body with shrink tape to prevent air leaks.

3. Submit at least two blanks (or 10% of the total samples, whichever is greater) for each set of samples. Remove the caps from the field blank cassettes and store the caps and cassettes in a clean area (bag or box) during the sampling period. Replace the caps in the cassettes when sampling is completed.

4. Sample at 0.5 L/min or greater. Do not exceed 1 mg total dust loading on the filter. Adjust sampling flow rate, Q (L/min), and time to produce a fiber density, E (fibers/mm^2), of 100 to 1300 fibers/m^2 [3.85×10^4 to 5×10^5 fibers per 25-mm filter with effective collection area (A_c=385 mm^2)] for optimum counting precision (see step 21 below). Calculate the minimum sampling time, $t_{minimum}$ (min) at the action level (one-half of the current standard), L (f/cc) of the fibrous aerosol being sampled:

$$t_{minimum} = \frac{(Ac)(E)}{(Q)(L)10^3}$$

5. Remove the field monitor at the end of sampling, replace the plastic top cover and small end caps, and store the monitor.

6. Ship the samples in a rigid container with sufficient packing material to prevent jostling or damage.

Note: Do not use polystyrene foam in the shipping container because of electrostatic forces which may cause fiber loss from the sample filter.

Sample Preparation

Note: The object is to produce samples with a smooth (non-grainy) background in a medium with a refractive index equal to or less than 1.46. The method below collapses the filter for easier focusing and produces permanent mounts which are useful for quality control and interlaboratory comparison. Other mounting techniques meeting the above criteria may also be used, e.g., the nonpermanent field mounting technique used in P & CAM 239.

7. Ensure that the glass slides and cover slips are free of dust and fibers.

8. Place 40 to 60 ml of acetone into a Guth-type flask. Stopper the flask with a single-hole rubber stopper through which a glass tube extends 5 to 8 cm into the flask. The portion of the glass tube that exits the top of the stopper (8 to 10 cm) is bent downward in an elbow that makes an angle of 20 to 30 degrees with the horizontal.

9. Place the flask in a stirring hotplate or wrap in a heating mantle. Heat the acetone gradually to its boiling temperature (ca. 58 °C).

Caution.—The acetone vapor must be generated in a ventilated fume hood away from all open flames and spark sources. Alternate heating methods can be used, providing no open flame or sparks are present.

10. Mount either the whole sample filter or a wedge cut from the sample filter on a clean glass slide.

a. Cut wedges of ca. 25 percent of the filter area with a curved-blade steel surgical knife using a rocking motion to prevent tearing.

b. Place the filter or wedge, dust side up, on the slide. Static electricity will usually keep the filter on the slide until it is cleared.

c. Hold the glass slide supporting the filter approximately 1 to 2 cm from the glass tube port where the acetone vapor is escaping from the heated flask. The acetone vapor stream should cause a condensation spot on the glass slide ca. 2 to 3 cm in diameter. Move the glass slide gently in the vapor stream. The filter should clear in 2 to 5 sec. If the filter curls, distorts, or is otherwise rendered unusable, the vapor stream is probably not strong enough. Periodically wipe the outlet port with tissue to prevent liquid acetone dripping onto the filter.

d. Using the hypodermic syringe with a 22-gauge needle, place 1 to 2 drops of triacetin on the filter. Gently lower a clean 25-mm square cover slip down onto the filter at a slight angle to reduce the possibility of forming bubbles. If too many bubbles form or the amount of triacetin is insufficient, the cover slip may become detached within a few hours.

e. Glue the edges of the cover slip to the glass slide using a lacquer or nail polish.

Note: If clearing is slow, the slide preparation may be heated on a hotplate (surface temperature 50 °C) for 15 min to hasten clearing. Counting may proceed

immediately after clearing and mounting are completed.

Calibration and Quality Control

11. Calibration of the Walton-Beckett graticule. The diameter, d_c(mm), of the circular counting area and the disc diameter must be specified when ordering the graticule.

a. Insert any available graticule into the eyepiece and focus so that the graticule lines are sharp and clear.

b. Set the appropriate interpupillary distance and, if applicable, reset the binocular head adjustment so that the magnification remains constant.

c. Install the 40 to 45X phase objective.

d. Place a stage micrometer on the microscope object stage and focus the microscope on the graduated lines.

e. Measure the magnified grid length, L_o(mm), using the stage micrometer.

f. Remove the graticule from the microscope and measure its actual grid length, L_a(mm). This can best be accomplished by using a stage fitted with verniers.

g. Calculate the circle diameter, d_c(mm), for the Walton-Beckett graticule:

$$d_c = \frac{L_a \times D}{L_o}$$

Example.—If L_o = 108 um, L_a = 2.93 mm and D = 100 um, then d_c = 2.71 mm.

h. Check the field diameter, D(acceptable range 100 mm ± 2 mm) with a stage micrometer upon receipt of the graticule from the manufacturer. Determine field area (mm^2).

12. Microscope adjustments. Follow the manufacturer's instructions and also the following:

a. Adjust the light source for even illumination across the field of view at the condenser iris.

Note: Kohler illumination is preferred, where available.

b. Focus on the particulate material to be examined.

c. Make sure that the field iris is in focus, centered on the sample, and open only enough to fully illuminate the field of view.

d. Use the telescope ocular supplied by the manufacturer to ensure that the phase rings (annular diaphragm and phase-shifting elements) are concentric.

13. Check the phase-shift detection limit of the microscope periodically.

a. Remove the HSE/NPL phase-contrast test slide from its shipping container and center it under the phase objective.

b. Bring the blocks of grooved lines into focus.

Note: The slide consists of seven sets of grooves (ca. 20 grooves to each block) in descending order of visibility from sets 1 to 7. The requirements for counting are that the microscope optics must resolve the grooved lines in set 3 completely, although they may appear somewhat faint, and that the grooved lines in sets 6 to 7 must be invisible. Sets 4 and 5 must be at least partially visible but may vary slightly in visibility between microscopes. A microscope which fails to meet these requirements has either too low or too high a resolution to be used for asbestos counting.

c. If the image quality deteriorates, clean the microscope optics and, if the problem persists, consult the microscope manufacturer.

14. Quality control of fiber counts.

a. Prepare and count field blanks along with the field samples. Report the counts on each blank. Calculate the mean of the field blank counts and subtract this value from each sample count before reporting the results.

Note 1: The identity of the blank filters should be unknown to the counter until all counts have been completed.

Note 2: If a field blank yields fiber counts greater than 7 fibers/100 fields, report possible contamination of the samples.

b. Perform blind recounts by the same counter on 10 percent of filters counted (slides relabeled by a person other than the counter).

15. Use the following test to determine whether a pair of counts on the same filter should be rejected because of possible bias. This statistic estimates the counting repeatability at the 95% confidence level. Discard the sample if the difference between the two counts exceeds 2.77(F)s_r, where F=average of the two fiber counts and s_r=relative standard deviation, which should be derived by each laboratory based on historical in-house data.

Note: If a pair of counts is rejected as a result of this test, recount the remaining samples in the set and test the new counts against the first counts. Discard all rejected paired counts.

16. Enroll each new counter in a training course that compares performance of counters on a variety of samples using this procedure.

Note: To ensure good reproducibility, all laboratories engaged in asbestos counting are required to participate in the Proficiency Analytical Testing (PAT) Program and should routinely participate with other asbestos fiber counting laboratories in the exchange of field samples to compare performance of counters.

Measurement

17. Place the slide on the mechanical stage of the calibrated microscope with the center of the filter under the objective lens. Focus the microscope on the plane of the filter.

18. Regularly check phase-ring alignment and Kohler illumination.

19. The following are the counting rules:

a. Count only fibers longer than 5 um. Measure the length of curved fibers along the curve.

b. Count only fibers with a length-to-width ratio equal to or greater than 3:1.

c. For fibers that cross the boundary of the graticule field, do the following:

1. Count any fiber longer tha 5 um that lies entirely within the graticule area.

2. Count as ½ fiber any fiber with only one end lying within the graticule area.

3. Do not count any fiber that crosses the graticule boundary more than once.

4. Reject and do not count all other fibers.

d. Count bundles of fibers as one fiber unless individual fibers can be identified by observing both ends of a fiber.

e. Count enough graticule fields to yield 100 fibers. Count a minimum of 20 fields. Stop at 100 fields regardless of fiber count.

20. Start counting from one end of the filter and progress along a radial line to the other end, shift either up or down on the filter, and continue in the reverse direction. Select fields randomly by looking away from the eyepiece briefly while advancing the mechanical stage. When an agglomerate covers ca. ⅛ or more of the field of view, reject the field and select another. Do not report rejected fields in the number of total fields counted.

Note: When counting a field, continuously scan a range of focal planes by moving the fine focus knob to detect very fine fibers which have become embedded in the filter. The small-diameter fibers will be very faint but are an important contribution to the total count.

Calculations

21. Calculate and report fiber density on the filter, E (fibers/mm^2); by dividing the total fiber count, F; minus the mean field blank count, B, by the number of fields, n; and the field area, A_f (0.00785 mm^2 for a properly calibrated Walton-Beckett graticule):

$$E = \frac{(F/n_f - (B/n_b)}{A_f} \text{ fibers/mm}^2$$

where:

n_f=number of fields in submission sample

n_b=number of fields in blank sample

22. Calculate the concentration, C (f/cc), of fibers in the air volume sampled, V (L), using the effective collection area of the filter, A_c (385 mm^2 for a 25-mm filter):

$$C = \frac{(E)(A_c)}{V(10^3)}$$

Note: Periodically check and adjust the value of A_c, if necessary.

Appendix C to § 1915.1001—Qualitative and Quantitative Fit Testing Procedures—Mandatory

Qualitative Fit Test Protocols

I. Isoamyl Acetate Protocol.

A. Odor Threshold Screening

1. Three 1-liter glass jars with metal lids (e.g. Mason or Bell jars) are required.

2. Odor-free water (e.g. distilled or spring water) at approximately 25° C shall be used for the solutions.

3. The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1-liter jar and shaking for 30 seconds. This solution shall be prepared new at least weekly.

4. The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but shall not be connected to the same recirculating ventilation system.

5. The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor free water using a clean dropper or pipette. Shake for 30 seconds and allow to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution may be used for only one day.

6. A test blank is prepared in a third jar by adding 500 cc of odor free water.

7. The odor test and test blank jars shall be labelled 1 and 2 for jar identification. If the labels are put on the lids they can be periodically peeled, dried off and switched to maintain the integrity of the test.

8. The following instructions shall be typed on a card and placed on the table in front of the two test jars (i.e. 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

9. The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

10. If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test may not be used.

11. If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

B. Respirator Selection

1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers. The selection shall include at least five sizes of elastomeric half facepieces, from at least two manufacturers.

2. The selection process shall be conducted in a room separate from the fit-test chamber to prevent odor fatigue. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a "comfortable" respirator. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, as it is only a review.

3. The test subject should understand that the employee is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape and, if fit properly and used properly will provide adequate protection.

4. The test subject holds each facepiece up to the face and eliminates those which obviously do not give a comfortable fit. Normally, selection will begin with a half-mask and if a good fit cannot be found, the subject will be asked to test the full facepiece respirators. (A small percentage of users will not be able to wear any half-mask.)

5. The more comfortable facepieces are noted; the most comfortable mask is donned and *worn at least five minutes* to assess comfort. All donning and adjustments of the facepiece shall be performed by the test subject without assistance from the test conductor or other person. Assistance in assessing comfort can be given by discussing the points in #6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

- Positioning of mask on nose.
- Room for eye protection.
- Room to talk.
- Positioning mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed.
- Strap tension.
- Fit across nose bridge.
- Distance from nose to chin.
- Tendency to slip.
- Self-observation in mirror.

8. The test subject shall conduct the conventional negative and positive-pressure fit checks (e.g. see ANSI Z88.2–1980). Before conducting the negative- or positive-pressure test the subject shall be told to "seat" the mask by rapidly moving the head from side-to-side and up and down, while taking a few deep breaths.

9. The test subject is now ready for fit testing.

10. After passing the fit test, the test subject shall be questioned again regarding the comfort of the respirator. If it has become uncomfortable, another model of respirator shall be tried.

11. The employee shall be given the opportunity to select a different facepiece and be retested if the chosen facepiece becomes increasingly uncomfortable at any time.

C. Fit Test

1. The fit test chamber shall be similar to a clear 55 gal drum liner suspended inverted over a 2 foot diameter frame, so that the top of the chamber is about 6 inches above the test subject's head. The inside top center of the chamber shall have a small hook attached.

2. Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or masks shall be changed at least weekly.

3. After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

4. A copy of the following test exercises and rainbow passage shall be taped to the inside of the test chamber:

Test Exercises

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are *deep* and *regular*.

iii. Turn head all the way from one side to the other. Inhale on each side. Be certain movement is complete. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Inhale when head is in the full up position (looking toward ceiling). Be certain motions are complete and made about every second. Do not bump the respirator on the chest.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

vi. Jogging in place.

vii. Breathe normally.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

5. Each test subject shall wear the respirator for at least 10 minutes before starting the fit test.

6. Upon entering the test chamber, the test subject shall be given a 6 inch by 5 inch piece of paper towel or other porous absorbent single ply material, folded in half and wetted with three-quarters of one cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

7. Allow two minutes for the IAA test concentration to be reached before starting

the fit-test exercises. This would be an appropriate time to talk with the test subject, to explain the fit test, the importance of cooperation, the purpose for the head exercises, or to demonstrate some of the exercises.

8. Each exercise described in #4 above shall be performed for at least one minute.

9. If at any time during the test, the subject detects the banana-like odor of IAA, the test has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

10. If the test is failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber, and again begin the procedure described in the c(4) through c(8) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

11. If a person cannot pass the fit test described above wearing a half-mask respirator from the available selection, full facepiece models must be used.

12. When a respirator is found that passes the test, the subject breaks the faceseal and takes a breath before exiting the chamber. This is to assure that the reason the test subject is not smelling the IAA is the good fit of the respirator facepiece seal and not olfactory fatigue.

13. When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the area from becoming contaminated, the used towels shall be kept in a self-sealing bag so there is no significant IAA concentration buildup in the test chamber during subsequent tests.

14. At least two facepieces shall be selected for the IAA test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

15. Persons who have successfully passed this fit test with a half-mask respirator may be assigned the use of the test respirator in atmospheres with up to 10 times the PEL of airborne asbestos.

16. The test shall not be conducted if there is any hair growth between the skin the facepiece sealing surface.

17. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

18. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

19. Qualitative fit testing shall be repeated at least every six months.

20. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e., multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. Recordkeeping

A summary of all test results shall be maintained in each office for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of the test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

II. Saccharin Solution Aerosol Protocol

A. Respirator Selection

Respirators shall be selected as described in section IB (respirator selection) above, except that each respirator shall be equipped with a particulate filter.

B. Taste Threshold Screening

1. An enclosure about head and shoulders shall be used for threshold screening (to determine if the individual can taste saccharin) and for fit testing. The enclosure shall be approximately 12 inches in diameter by 14 inches tall with at least the front clear to allow free movement of the head when a respirator is worn.

2. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

3. The entire screening and testing procedure shall be explained to the test subject prior to conducting the screening test.

4. During the threshold screening test, the test subject shall don the test enclosure and breathe with open mouth with tongue extended.

5. Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

6. The threshold check solution consists of 0.83 grams of sodium saccharin, USP in water. It can be prepared by putting 1 cc of the test solution (see C 7 below) in 100 cc of water.

7. To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then is released and allowed to fully expand.

8. Ten squeezes of the nebulizer bulb are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

9. If the first response is negative, ten more squeezes of the nebulizer bulb are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

10. If the second response is negative ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

11. The test conductor will take note of the number of squeezes required to elicit a taste response.

12. If the saccharin is not tasted after 30 squeezes (Step 10), the saccharin fit test cannot be performed on the test subject.

13. If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

14. Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

15. The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least every four hours.

C. Fit Test

1. The test subject shall don and adjust the respirator without the assistance from any person.

2. The fit test uses the same enclosure described in IIB above.

3. Each test subject shall wear the respirator for at least 10 minutes before starting the fit test.

4. The test subject shall don the enclosure while wearing the respirator selected in section 1B above. This respirator shall be properly adjusted and equipped with a particulate filter.

5. The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

6. A second DeVilbiss Model 40 Inhalation Medication Nebulizer is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

7. The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

8. As before, the test subject shall breathe with mouth open and tongue extended.

9. The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure using the same technique as for the taste threshold screening and the same number of squeezes required to elicit a taste response in the screening. (See B8 through B10 above).

10. After generation of the aerosol read the following instructions to the test subject. The test subject shall perform the exercises for one minute each.

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are *deep* and *regular*.

iii. Turn head all the way from one side *to the other*. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Be certain motions are complete. Inhale when head is in the full up position (when looking toward the ceiling). Do not bump the respirator on the chest.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

vi. Jogging in place.

vii. Breathe normally.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

11. At the beginning of each exercise, the aerosol concentration shall be replenished using one-half the number of squeezes as initially described in C9.

12. The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected.

13. If the saccharin is detected the fit is deemed unsatisfactory and a different respirator shall be tried.

14. At least two facepieces shall be selected by the saccharin solution aerosol test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

15. Successful completion of the test protocol shall allow the use of the half mask tested respirator in contaminated atmospheres up to 10 times the PEL of asbestos. In other words this protocol may be used to assign protection factors no higher than ten.

16. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

17. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

18. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

19. Qualitative fit testing shall be repeated at least every six months.

20. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. Recordkeeping

A summary of all test results shall be maintained in each office for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

III. Irritant Fume Protocol

A. Respirator selection

Respirators shall be selected as described in section IB above, except that each respirator shall be equipped with a high-efficiency cartridge.

B. Fit test

1. The test subject shall be allowed to smell a weak concentration of the irritant smoke to familiarize the subject with the characteristic odor.

2. The test subject shall properly don the respirator selected as above, and wear it for at least 10 minutes before starting the fit test.

3. The test conductor shall review this protocol with the test subject before testing.

4. The test subject shall perform the conventional positive pressure and negative pressure fit checks (see ANSI Z88.2 1980). Failure of either check shall be cause to select an alternate respirator.

5. Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part #5645, or equivalent. Attach a short length of tubing to one end of the smoke tube. Attach the other end of the smoke tube to a low pressure air pump set to deliver 200 milliliters per minute.

6. Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep the eyes closed while the test is performed.

7. The test conductor shall direct the stream of irritant smoke from the tube towards the faceseal area of the test subject. The person conducting the test shall begin with the tube at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

8. The test subject shall be instructed to do the following exercises while the respirator is being challenged by the smoke. Each exercise shall be performed for one minute.

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are *deep* and *regular*.

iii. Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Be certain motions are complete and made every second. Inhale when head is in the full up position (looking toward ceiling). Do not bump the respirator against the chest.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Repeating it after the test conductor (keeping eyes closed) will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

vi. Jogging in Place.

vii. Breathe normally.

9. The test subject shall indicate to the test conductor if the irritant smoke is detected. If smoke is detected, the test conductor shall stop the test. In this case, the tested respirator is rejected and another respirator shall be selected.

10. Each test subject passing the smoke test (i.e. without detecting the smoke) shall be given a sensitivity check of smoke from the same tube to determine if the test subject reacts to the smoke. Failure to evoke a response shall void the fit test.

11. Steps B4, B9, B10 of this fit test protocol shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agents.

12. At least two facepieces shall be selected by the irritant fume test protocol. The test subject shall be given the opportunity to wear them for one week to choose the one which is more comfortable to wear.

13. Respirators successfully tested by the protocol may be used in contaminated atmospheres up to ten times the PEL of asbestos.

14. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

15. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

16. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

17. Qualitative fit testing shall be repeated at least every six months.

18. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmestic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

C. Recordkeeping

A summary of all test results shall be maintained in each office for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent

Quantitative Fit Test Procedures

1. General.

a. The method applies to the negative-pressure nonpowered air-purifying respirators only.

b. The employer shall assign one individual who shall assume the full responsibility for implementing the respirator quantitative fit test program.

2. *Definition.*

a. *Quantitative Fit Test* means the measurement of the effectiveness of a respirator seal in excluding the ambient atmosphere. The test is performed by dividing the measured concentration of challenge agent in a test chamber by the measured concentration of the challenge agent inside the respirator facepiece when the normal air purifying element has been replaced by an essentially perfect purifying element.

b. *Challenge Agent* means the air contaminant introduced into a test chamber so that its concentration inside and outside the respirator may be compared.

c. *Test Subject* means the person wearing the respirator for quantitative fit testing.

d. *Normal Standing Position* means standing erect and straight with arms down along the sides and looking straight ahead.

e. *Fit Factor* means the ratio of challenge agent concentration outside with respect to the inside of a respirator inlet covering (facepiece or enclosure).

3. *Apparatus.*

a. *Instrumentation.* Corn oil, sodium chloride or other appropriate aerosol generation, dilution, and measurement systems shall be used for quantitative fit test.

b. *Test chamber.* The test chamber shall be large enough to permit all test subjects to freely perform all required exercises without distributing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air yet uniform in concentration throughout the chamber.

c. When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

d. The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000.

e. The combination of substitute air-purifying elements (if any), challenge agent, and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of PEL to the challenge agent at any time during the testing process.

f. The sampling port on the test specimen respirator shall be placed and constructed so that there is no detectable leak around the port, a free air flow is allowed into the sampling line at all times and so there is no interference with the fit or performance of the respirator.

g. The test chamber and test set-up shall permit the person administering the test to observe one test subject inside the chamber during the test.

h. The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent constant within a 10 percent variation for the duration of the test.

i. The time lag (interval between an event and its being recorded on the strip chart) of the instrumentation may not exceed 2 seconds.

j. The tubing for the test chamber atmosphere and for the respirator sampling port shall be the same diameter, length and material. It shall be kept as short as possible. The smallest diameter tubing recommended by the manufacturer shall be used.

k. The exhaust flow from the test chamber shall pass through a high-efficiency filter before release to the room.

l. When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

4. *Procedural Requirements.*

a. The fitting of half-mask respirators should be started with those having multiple sizes and a variety of interchangeable cartridges and canisters such as the MSA Comfo II–M, North M. Survivair M, A-O M, or Scott-M. Use either of the tests outlined below to assure that the facepiece is properly adjusted.

(1) *Positive pressure test.* With the exhaust port(s) blocked, the negative pressure of slight inhalation should remain constant for several seconds.

(2) *Negative pressure test.* With the intake port(s) blocked, the negative pressure slight inhalation should remain constant for several seconds.

b. After a facepiece is adjusted, the test subject shall wear the facepiece for at least 5 minutes before conducting a qualitive test by using either of the methods described below and using the exercise regime described in 5.a., b., c., d, and e.

(1) *Isoamyl acetate test.* When using organic vapor cartridges, the test subject who can smell the odor should be unable to detect the odor of isoamyl acetate squirted into the air near the most vulnerable portions of the facepiece seal. In a location which is separated from the test area, the test subject shall be instructed to close her/his eyes during the test period. A combination cartridge or canister with organic vapor and high-efficiency filters shall be used when available for the particular mask being tested. The test subject shall be given an opportunity to smell the odor of isoamyl acetate before the test is conducted.

(2) *Irritant fume test.* When using high-efficiency filters, the test subject should be unable to detect the odor of irritant fume (stannic chloride or titanium tetrachloride ventilation smoke tubes) squirted into the air near the most vulnerable portions of the facepiece seal. The test subject shall be instructed to close her/his eyes during the test period.

c. The test subject may enter the quantitative testing chamber only if she or he has obtained a satisfactory fit as stated in 4.b. of this Appendix.

d. Before the subject enters the test chamber, a reasonably stable challenge agent concentration shall be measured in the test chamber.

e. Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half-mask and 1 percent for a full facepiece.

f. A stable challenge agent concentration shall be obtained prior to the actual start of testing.

(1) Respirator restraining straps may not be overtightened for testing. The straps shall be adjusted by the wearer to give a reasonably comfortable fit typical of normal use.

5. *Exercise Regime.* Prior to entering the test chamber, the test subject shall be given complete instructions as to her/his part in the test procedures. The test subject shall perform the following exercises, in the order given, for each independent test.

a. *Normal Breathing (NB).* In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

b. *Deep Breathing (DB).* In the normal standing position the subject shall do deep breathing for at least one minute pausing so as not to hyperventilate.

c. *Turning head side to side (SS).* Standing in place the subject shall slowly turn his/her head from side between the extreme positions to each side. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

d. *Moving head up and down (UD).* Standing in place, the subject shall slowly move his/her head up and down between the extreme position straight up and the extreme position straight down. The head shall be held at each extreme position for at least 5 seconds. Perform for at least three complete cycles.

e. *Reading (R).* The test subject (keeping eyes closed) shall repeat after the test conductor the 'rainbow passage' at the end of this section. The subject shall talk slowly and aloud so as to be heard clearly by the test conductor or monitor.

f. *Grimace (G).* The test subject shall grimace, smile, frown, and generally contort the face using the facial muscles. Continue for at least 15 seconds.

g. *Bend over and touch toes (B).* The test subject shall bend at the waist and touch toes and return to upright position. Repeat for at least 30 seconds.

h. *Jogging in place (J).* The test subject shall perform jog in place for at least 30 seconds.

i. *Normal Breathing (NB).* Same as exercise a.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say

he is looking for the pot of gold at the end of the rainbow.

6. The test shall be terminated whenever any single peak penetration exceeds 5 percent for half-masks and 1 percent for full facepieces. The test subject may be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed inadequate.

7. *Calculation of Fit Factors.*

a. The fit factor determined by the quantitative fit test equals the average concentration inside the respirator.

b. The average test chamber concentration is the arithmetic average of the test chamber concentration at the beginning and of the end of the test.

c. The average peak concentration of the challenge agent inside the respirator shall be the arithmetic average peak concentrations for each of the nine exercises of the test which are computed as the arithmetic average of the peak concentrations found for each breath during the exercise.

d. The average peak concentration for an exercise may be determined graphically if there is not a great variation in the peak concentrations during a single exercise.

8. *Interpretation of Test Results.* The fit factor measured by the quantitative fit testing shall be the lowest of the three protection factors resulting from three independent tests.

9. *Other Requirements.*

a. The test subject shall not be permitted to wear a half-mask or full facepiece mask if the minimum fit factor of 100 or 1,000, respectively, cannot be obtained. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

b. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

c. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

d. The test subject shall be given the opportunity to wear the assigned respirator for one week. If the respirator does not provide a satisfactory fit during actual use, the test subject may request another QNFT which shall be performed immediately.

e. A respirator fit factor card shall be issued to the test subject with the following information:

(1) Name.

(2) Date of fit test.

(3) Protection factors obtained through each manufacturer, model and approval number of respirator tested.

(4) Name and signature of the person that conducted the test.

f. Filters used for qualitative or quantitative fit testing shall be replaced weekly, whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily or sooner if there is any indication of breakthrough by the test agent.

10. In addition, because the sealing of the respirator may be affected, quantitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e., multiple extractions without prothesis, or acquiring dentures.

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

11. *Recordkeeping.*

A summary of all test results shall be maintained for 3 years. The summary shall include:

(1) Name of test subject.

(2) Date of testing.

(3) Name of the test conductor.

(4) Fit factors obtained from every respirator tested (indicate manufacturer, model, size and approval number).

Appendix D to § 1915.1001—Medical Questionnaires; Mandatory

This mandatory appendix contains the medical questionnaires that must be administered to all employees who are exposed to asbestos above the action level, and who will therefore be included in their employer's medical surveillance program. Part 1 of the appendix contains the Initial Medical Questionnaire, which must be obtained for all new hires who will be covered by the medical surveillance requirements. Part 2 includes the abbreviated Periodical Medical Questionnaire, which must be administered to all employees who are provided periodic medical examinations under the medical surveillance provisions of the standard.

Part 1
INITIAL MEDICAL QUESTIONNAIRE

1 NAME _____

2. SOCIAL SECURITY # ___ ___ ___ ___ ___ ___ ___ ___ ___
1 2 3 4 5 6 7 8 9

3. CLOCK NUMBER ___ ___ ___ ___ ___ ___
10 11 12 13 14 15

4. PRESENT OCCUPATION _____

5 PLANT _____

6. ADDRESS _____

7. _____
(Zip Code)

8. TELEPHONE NUMBER _____

9. INTERVIEWER _____

10. DATE _____ ___ ___ ___ ___ ___ ___
16 17 18 19 20 21

11. Date of Birth _____ ___ ___ ___ ___ ___ ___
Month Day Year 22 23 24 25 26 27

12. Place of Birth _____

13. Sex
1. Male ___
2. Female ___

14. What is your marital status?
1. Single ___
2. Married ___
3. Widowed ___
4. Separated/ Divorced ___

15. Race
1. White ___
2. Black ___
3. Asian ___
4. Hispanic ___
5. Indian ___
6. Other ___

16. What is the highest grade completed in school? _____
(For example 12 years is completion of high school)

OCCUPATIONAL HISTORY

17A. Have you ever worked full time (30 hours per week or more) for 6 months or more? 1. Yes __ 2. No __

IF YES TO 17A:

B. Have you ever worked for a year or more in any dusty job? 1. Yes __ 2. No __ 3. Does Not Apply __

Specify job/industry _____ Total Years Worked ___

Was dust exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

C. Have you even been exposed to gas or chemical fumes in your work? 1. Yes ___ 2. No ___
Specify job/industry _____ Total Years Worked ___

Was exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

D. What has been your usual occupation or job--the one you have worked at the longest?

1. Job occupation _____

2. Number of years employed in this occupation _____

3. Position/job title _____

4. Business, field or industry _____

(Record on lines the years in which you have worked in any of these industries, e.g. 1960-1969)

Have you ever worked:

		YES	NO
E.	In a mine?.....	[__]	[__]
F.	In a quarry?.....	[__]	[__]
G.	In a foundry?.....	[__]	[__]
H.	In a pottery?.....	[__]	[__]
I.	In a cotton, flax or hemp mill?.....	[__]	[__]
J.	With asbestos?.....	[__]	[__]

18. PAST MEDICAL HISTORY

	YES	NO
A. Do you consider yourself to be in good health?	[__]	[__]
If "NO" state reason _____		
B. Have you any defect of vision?.....	[__]	[__]
If "YES" state nature of defect _____		
C. Have you any hearing defect?.....	[__]	[__]
If "YES" state nature of defect _____		

D. Are you suffering from or have you ever suffered from:

a. Epilepsy (or fits, seizures, convulsions)? [__] [__]

b. Rheumatic fever? [__] [__]

c. Kidney disease? [__] [__]

d. Bladder disease? [__] [__]

e. Diabetes? [__] [__]

f. Jaundice? [__] [__]

19. CHEST COLDS AND CHEST ILLNESSES

19A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time) 1. Yes __ 2. No __ 3. Don't get colds __

20A. During the past 3 years, have you had any chest illnesses that have kept you off work, indoors at home, or in bed? 1. Yes __ 2. No __

IF YES TO 20A:

B. Did you produce phlegm with any of these chest illnesses? 1. Yes __ 2. No __ 3. Does Not Apply __

C. In the last 3 years, how many such illnesses with (increased) phlegm did you have which lasted a week or more? Number of illnesses __ No such illnesses __

21. Did you have any lung trouble before the age of 16? 1. Yes __ 2. No __

22. Have you ever had any of the following?

1A. Attacks of bronchitis? 1. Yes __ 2. No __

IF YES TO 1A:

B. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

C. At what age was your first attack? Age in Years __ Does Not Apply __

2A. Pneumonia (include bronchopneumonia)? 1. Yes __ 2. No __

IF YES TO 2A:

B. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

C At what age did you first have it? Age in Years __ Does Not Apply __

3A. Hay Fever? 1. Yes __ 2. No __

IF YES TO 3A:

B. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

C. At what age did it start? Age in Years __ Does Not Apply __

23A. Have you ever had chronic bronchitis? 1. Yes __ 2. No __

IF YES TO 23A:

B. Do you still have it? 1. Yes __ 2. No __ 3. Does Not Apply __

C. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

D. At what age did it start? Age in Years __ Does Not Apply __

24A. Have you ever had emphysema? 1. Yes __ 2. No __

IF YES TO 24A:

B. Do you still have it? 1. Yes __ 2. No __ 3. Does Not Apply __

C. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

D. At what age did it start? Age in Years __ Does Not Apply __

25A. Have you ever had asthma? 1. Yes __ 2. No __

IF YES TO 25A:

B. Do you still have it? 1. Yes __ 2. No __ 3. Does Not Apply __

C. Was it confirmed by a doctor? 1. Yes __ 2. No __ 3. Does Not Apply __

D. At what age did it start? Age in Years __ Does Not Apply __

E. If you no longer have it, at what age did it stop? Age stopped __ Does Not Apply __

26. Have you ever had:

A. Any other chest illness? 1. Yes __ 2. No __

If yes, please specify _____

B. Any chest operations? 1. Yes __ 2. No __

If yes, please specify _____

C. Any chest injuries? 1. Yes __ 2. No __

If yes, please specify _____

27A. Has a doctor ever told you that you had heart trouble? 1. Yes __ 2. No __

IF YES TO 27A:

B. Have you ever had treatment for heart trouble in the past 10 years? 1. Yes __ 2. No __ 3. Does Not Apply __

28A. Has a doctor ever told you that you had high blood pressure? 1. Yes __ 2. No __

IF YES TO 28A:

B. Have you had any treatment for high blood pressure (hypertension) in the past 10 years? 1. Yes __ 2. No __ 3. Does Not Apply __

29. When did you last have your chest X-rayed? (Year) __ __ __ __
25 26 27 28

30. Where did you last have your chest X-rayed (if known)? _____

What was the outcome? _____

FAMILY HISTORY

31. Were either of your natural parents ever told by a doctor that they had a chronic lung condition such as:

	FATHER			MOTHER		
	1. Yes	2. No	3. Don't Know	1. Yes	2. No	3. Don't Know
A. Chronic Bronchitis?	___	___	___	___	___	___
B. Emphysema?	___	___	___	___	___	___
C. Asthma?	___	___	___	___	___	___
D. Lung cancer?	___	___	___	___	___	___
E. Other chest conditions	___	___	___	___	___	___
F. Is parent currently alive?	___	___	___	___	___	___

G. Please Specify

___ Age if Living	___ Age if Living
___ Age at Death	___ Age at Death
___ Don't Know	___ Don't Know

H. Please specify cause of death

_____ _____

COUGH

32A. Do you usually have a cough? (Count a cough with first smoke or on first going out of doors. Exclude clearing of throat.) [If no, skip to question 32C.] — 1. Yes __ 2. No __

B. Do you usually cough as much as 4 to 6 times a day 4 or more days out of the week? — 1. Yes __ 2. No __

C. Do you usually cough at all on getting up or first thing in the morning? — 1. Yes __ 2. No __

D. Do you usually cough at all during the rest of the day or at night? — 1. Yes __ 2. No __

IF YES TO ANY OF ABOVE (32A, B, C, or D), ANSWER THE FOLLOWING. IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO NEXT PAGE

E. Do you usually cough like this on most days for 3 consecutive months or more during the year? — 1. Yes __ 2. No __ 3. Does not apply __

F. For how many years have you had the cough? — Number of years __ Does not apply __

33A. Do you usually bring up phlegm from your chest? (Count phlegm with the first smoke or on first going out of doors. Exclude phlegm from the nose. Count swallowed phlegm.) (If no, skip to 33C) — 1. Yes __ 2. No __

B. Do you usually bring up phlegm like this as much as twice a day 4 or more days out of the week? — 1. Yes __ 2. No __

C. Do you usually bring up phlegm at all on getting up or first thing in the morning? — 1. Yes __ 2. No __

D. Do you usually bring up phlegm at all during the rest of the day or at night? — 1. Yes __ 2. No __

IF YES TO ANY OF THE ABOVE (33A, B, C, or D), ANSWER THE FOLLOWING: IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E. Do you bring up phlegm like this on most days for 3 consecutive months or more during the year? — 1. Yes __ 2. No __ 3. Does not apply __

F. For how many years have you had trouble with phlegm? — Number of years __ / Does not apply __

EPISODES OF COUGH AND PHLEGM

34A. Have you had periods or episodes of (increased*) cough and phlegm lasting for 3 weeks or more each year? — 1. Yes __ 2. No __
*(For persons who usually have cough and/or phlegm)

If YES TO 34A
B. For how long have you had at least 1 such episode per year? — Number of years __ / Does not apply __

WHEEZING

35A. Does your chest ever sound wheezy or whistling
1. When you have a cold? — 1. Yes __ 2. No __
2. Occasionally apart from colds? — 1. Yes __ 2. No __
3. Most days or nights? — 1. Yes __ 2. No __

IF YES TO 1, 2, or 3 in 35A
B. For how many years has this been present? — Number of years __ / Does not apply __

36A. Have you ever had an attack of wheezing that has made you feel short of breath? — 1. Yes __ 2. No __

IF YES TO 36A
B. How old were you when you had your first such attack? — Age in years __ / Does not apply __

C. Have you had 2 or more such episodes? — 1. Yes __ 2. No __ 3. Does not apply __

D. Have you ever required medicine or treatment for the(se) attack(s)? — 1. Yes __ 2. No __ 3. Does not apply __

BREATHLESSNESS

37. If disabled from walking by any condition other than heart or lung disease, please describe and proceed to question 39A.
Nature of condition(s)_____

38A. Are you troubled by shortness of breath when hurrying on the level or walking up a slight hill? — 1. Yes __ 2. No __

IF YES TO 38A

B. Do you have to walk slower than people of your age on the level because of breathlessness? — 1. Yes __ 2. No __ 3. Does not apply __

C. Do you ever have to stop for breath when walking at your own pace on the level? — 1. Yes __ 2. No __ 3. Does not apply __

D. Do you ever have to stop for breath after walking about 100 yards (or after a few minutes) on the level? — 1. Yes __ 2. No __ 3. Does not apply __

E. Are you too breathless to leave the house or breathless on dressing or climbing one flight of stairs? — 1. Yes __ 2. No __ 3. Does not apply __

TOBACCO SMOKING

39A. Have you ever smoked cigarettes? (No means less than 20 packs of cigarettes or 12 oz. of tobacco in a lifetime or less than 1 cigarette a day for 1 year.) — 1. Yes 2. No __

IF YES TO 39A

B. Do you now smoke cigarettes (as of one month ago) — 1. Yes __ 2. No __ 3. Does not apply __

C. How old were you when you first started regular cigarette smoking? — Age in years __ Does not apply __

D. If you have stopped smoking cigarettes completely, how old were you when you stopped? — Age stopped __ Check if still smoking __ Does not apply __

E. How many cigarettes do you smoke per day now? — Cigarettes per day __ Does not apply __

F. On the average of the entire time you smoked, how many cigarettes did you smoke per day? — Cigarettes per day __ Does not apply __

G. Do or did you inhale the cigarette smoke? — 1. Does not apply __ 2. Not at all __ 3. Slightly __ 4. Moderately __ 5. Deeply __

40A. Have you ever smoked a pipe regularly? (Yes means more than 12 oz. of tobacco in a lifetime.) — 1. Yes __ 2. No __

IF YES TO 40A:
FOR PERSONS WHO HAVE EVER SMOKED A PIPE

B. 1. How old were you when you started to smoke a pipe regularly? — Age __

2. If you have stopped smoking a pipe completely, how old were you when you stopped? — Age stopped __ / Check if still smoking pipe __ / Does not apply __

C. On the average over the entire time you smoked a pipe, how much pipe tobacco did you smoke per week? — __ oz. per week (a standard pouch of tobacco contains 1 1/2 oz.) / __ Does not apply

D. How much pipe tobacco are you smoking now? — oz. per week __ / Not currently smoking a pipe __

E. Do you or did you inhale the pipe smoke?
1. Never smoked __
2. Not at all __
3. Slightly __
4. Moderately __
5. Deeply __

41A. Have you ever smoked cigars regularly? (Yes means more than 1 cigar a week for a year) — 1. Yes __ 2. No __

IF YES TO 41A
FOR PERSONS WHO HAVE EVER SMOKED CIGARS

B. 1. How old were you when you started smoking cigars regularly? — Age __

2. If you have stopped smoking cigars completely, how old were you when you stopped. — Age stopped __ / Check if still smoking cigars __ / Does not apply __

C. On the average over the entire time you smoked cigars, how many cigars did you smoke per week? — Cigars per week __ / Does not apply __

D. How many cigars are you smoking per week now? — Cigars per week __ / Check if not smoking cigars currently __

E. Do or did you inhale the cigar smoke?
1. Never smoked __
2. Not at all __
3. Slightly __
4. Moderately __
5. Deeply __

Signature _____ Date _____

Part 2
PERIODIC MEDICAL QUESTIONNAIRE

1. NAME _____

2. SOCIAL SECURITY # ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
1 2 3 4 5 6 7 8 9

3. CLOCK NUMBER ___ ___ ___ ___ ___ ___
10 11 12 13 14 15

4. PRESENT OCCUPATION _____

5. PLANT _____

6. ADDRESS _____

7. _____
(Zip Code)

8. TELEPHONE NUMBER _____

9. INTERVIEWER _____

10. DATE _____ ___ ___ ___ ___ ___ ___
16 17 18 19 20 21

11. What is your marital status?
1. Single ___
2. Married ___
3. Widowed ___
4. Separated/ Divorced ___

12. OCCUPATIONAL HISTORY

12A. In the past year, did you work full time (30 hours per week or more) for 6 months or more? 1. Yes ___ 2. No ___

IF YES TO 12A:

12B. In the past year, did you work in a dusty job? 1. Yes ___ 2. No ___ 3. Does Not Apply ___

12C. Was dust exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

12D. In the past year, were you exposed to gas or chemical fumes in your work? 1. Yes ___ 2. No ___

12E. Was exposure: 1. Mild ___ 2. Moderate ___ 3. Severe ___

12F. In the past year, what was your:
1. Job/occupation? _____
2. Position/job title? _____

13. RECENT MEDICAL HISTORY

13A. Do you consider yourself to be in good health? Yes ___ No ___

If NO, state reason _____

13B. In the past year, have you developed:

	Yes	No
Epilepsy?	___	___
Rheumatic fever?	___	___
Kidney disease?	___	___
Bladder disease?	___	___
Diabetes?	___	___
Jaundice?	___	___
Cancer?	___	___

14. CHEST COLDS AND CHEST ILLNESSES

14A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time)

1. Yes ___ 2. No ___
3. Don't get colds ___

15A. During the past year, have you had any chest illnesses that have kept you off work, indoors at home, or in bed?

1. Yes ___ 2. No ___
3. Does Not Apply ___

IF YES TO 15A:

15B. Did you produce phlegm with any of these chest illnesses?

1. Yes ___ 2. No ___
3. Does Not Apply ___

15C. In the past year, how many such illnesses with (increased) phlegm did you have which lasted a week or more?

Number of illnesses ___
No such illnesses ___

16. RESPIRATORY SYSTEM

In the past year have you had:

	Yes or No	Further Comment on Positive Answers
Asthma	____	
Bronchitis	____	
Hay Fever	____	
Other Allergies	____	

	Yes or No	Further Comment on Positive Answers
Pneumonia	_____	
Tuberculosis	_____	
Chest Surgery	_____	
Other Lung Problems	_____	
Heart Disease	_____	

Do you have:

	Yes or No	Further Comment on Positive Answers
Frequent colds	_____	
Chronic cough	_____	
Shortness of breath when walking or climbing one flight or stairs	_____	

Do you:

Wheeze	_____	
Cough up phlegm	_____	
Smoke cigarettes	_____	Packs per day ___ How many years ___

Date _____ Signature _____

Appendix E to § 1915.1001—Interpretation and Classification of Chest Roentgenograms—Mandatory

(a) Chest roentgenograms shall be interpreted and classified in accordance with a professionally accepted Classification system and recorded on an interpretation form following the format of the CDC/NIOSH (M) 2.8 form. As a minimum, the content within the bold lines of this form (items 1 though 4) shall be included. This form is not to be submitted to NIOSH.

(b) Roentgenograms shall be interpreted and classified only by a B-reader, a board eligible/certified radiologist, or an experienced physician with known expertise in pneumoconioses.

(c) All interpreters, whenever interpreting chest roentgenograms made under this section, shall have immediately available for reference a complete set of the ILO–U/C International Classification of Radiographs for Pneumoconioses, 1980.

Appendix F to § 1915.1001—Work Practices and Engineering Controls for Automotive Brake Repair Operations—Non-Mandatory

This appendix is intended as guidance for employers in the automotive brake and clutch repair industry who wish to reduce their employees' asbestos exposures during repair operations to levels below the new standard's action level (0.1 f/cc). OSHA believes that employers in this industry sector are likely to be able to reduce their employees' exposures to asbestos by employing the engineering and work practice controls described in Sections A and B of this appendix. Those employers who choose to use these controls and who achieve exposures below the action level will thus be able to avoid any burden that might be imposed by complying with such requirements as medical surveillance, recordkeeping, training, respiratory protection, and regulated areas, which are triggered when employee exposures exceed the action level or PEL.

Asbestos exposure in the automotive brake and clutch repair industry occurs primarily during the replacement of clutch plates and brake pads, shoes, and linings. Asbestos fibers may become airborne when an automotive mechanic removes the asbestos-containing residue that has been deposited as brakes and clutches wear. Employee exposures to asbestos occur during the cleaning of the brake drum or clutch housing.

Based on evidence in the rulemaking record (Exs. 84–74, 84–263, 90–148), OSHA believes that employers engaged in brake repair operations who implement any of the work practices and engineering controls described in Sections A and B of this appendix may be able to reduce their employees' exposures to levels below the action level (0.1 fiber/cc). These control methods and the relevant record evidence on these and other methods are described in the following sections.

A. Enclosed Cylinder/HEPA Vacuum System Method

The enclosed cylinder-vacuum system used in one of the facilities visited by representatives of the National Institute for Occupational Safety and Health (NIOSH) during a health hazard evaluation of brake repair facilities (Ex. 84–263) consists of three components:

(1) A wheel-shaped cylinder designed to cover and enclose the wheel assembly;

(2) A compressed-air hose and nozzle that fits into a port in the cylinder; and

(3) A HEPA-filtered vacuum used to evacuate airborne dust generated within the cylinder by the compressed air.

To operate the system, the brake assembly is enclosed in a cylinder that has viewing ports to provide visibility and cotton sleeves through which the mechanic can handle the brake assembly parts. The cylinder effectively isolates asbestos dust in the drum from the mechanic's breathing zone. One company manufactures the brake assembly isolation cylinder in two sizes to fit brake drums in the 7-to-12-inch size range common to automobiles and light trucks and the 12-to-19-inch size range common to large commercial vehicles. The cylinder is equipped with built-in compressed-air guns and a connection for a vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filter. This type of filter is capable of removing all particles greater than 0.3 microns from the air. When the vacuum cleaner's filter is full, it must be replaced according to the manufacturer's instruction, and appropriate HEPA-filtered dual cartridge respirators should be worn during the process. The filter of the vacuum cleaner is assumed to be contaminated with asbestos fibers and should be handled carefully, wetted with a fine mist of water, placed immediately in a labelled plastic bag, and disposed of properly. When the cylinder is in place around the brake assembly and the HEPA vacuum is connected, compressed air is blown into the cylinder to loosen the residue from the brake assembly parts. The vacuum then evacuates the loosened material from within the cylinder, capturing the airborne material on the HEPA filter.

The HEPA vacuum system can be disconnected from the brake assembly isolation cylinder when the cylinder is not being used. The HEPA vacuum can then be used for clutch facing work, grinding, or other routine cleaning.

B. Compressed Air/Solvent System Method

A compressed-air hose fitted at the end with a bottle of solvent can be used to loosen the asbestos-containing residue and to capture the resulting airborne particles in the solvent mist. The mechanic should begin spraying the asbestos-contaminated parts with the solvent at a sufficient distance to ensure that the asbestos particles are not dislodged by the velocity of the solvent spray. After the asbestos particles are thoroughly wetted, the spray may be brought closer to the parts and the parts may be sprayed as necessary to remove grease and other material. The automotive parts sprayed with the mist are then wiped with a rag, which must then be disposed of appropriately. Rags should be placed in a labelled plastic bag or other container while they are still wet. This ensures that the asbestos fibers will not become airborne after the brake and clutch parts have been cleaned. (If cleanup rags are laundered rather than disposed of, they must be washed using methods appropriate for the laundering of asbestos-contaminated materials.)

OSHA believes that a variant of this compressed-air/solvent mist process offers advantages over the compressed-air/solvent mist technique discussed above, both in terms of costs and employee protection. The variant involves the use of spray cans filled with any of several solvent cleaners commercially available from auto supply stores. Spray cans of solvent are inexpensive, readily available, and easy to use. These cans will also save time, because no solvent delivery system has to be asembled, i.e., no compressed-air hose/mister ensemble. OSHA believes that a spray can will deliver solvent to the parts to be cleaned with considerably less force than the alternative compressed-air delivery system described above, and will thus generate fewer airborne asbestos fibers than the compressed-air method. The Agency therefore believes that the exposure levels of automotive repair mechanics using the spray can/solvent mist process will be even lower than the exposures reported by NIOSH (Ex. 84–263) for the compressed-air/solvent mist system (0.08 f/cc).

C. Information on the Effectiveness of Various Control Measures

The amount of airborne asbestos generated during brake and clutch repair operations depends on the work practices and engineering controls used during the repair or removal activity. Data in the rulemaking record document the 8-hour time-weighted average (TWA_8) asbestos exposure levels associated with various methods of brake and clutch repair and removal.

NIOSH submitted a report to the record entitled "Health Hazard Evaluation for Automotive Brake Repair" (Ex. 84–263). In addition, Exhibits 84–74 and 90–148 provided exposure data for comparing the airborne concentrations of asbestos generated by the use of various work practices during brake repair operations. These reports present exposure data for brake repair operations involving a variety of controls and work practices, including:

- Use of compressed air to blow out the brake drums;
- Use of a brush, without a wetting agent, to remove the asbestos-containing residue;
- Use of a brush dipped in water or a solvent to remove the asbestos-containing residue;
- Use of an enclosed vacuum cleaning system to capture the asbestos-containing residue; and
- Use of a solvent mixture applied with compressed air to remove the residue.

Prohibited Methods

The use of compressed air to blow the asbestos-containing residue off the surface of the brake drum removes the residue effectively but simultaneously produces an airborne cloud of asbestos fibers. According to NIOSH (Ex. 84–263), the peak exposures of mechanics using this technique were as high as 15 fibers/cc, and 8-hour TWA exposures ranged from 0.03 to 0.19 f/cc.

Dr. William J. Nicholson of the Mount Sinai School of Medicine (Ex. 84–74) cited

data from Knight and Hickish (1970) that indicated that the concentration of asbestos ranged from 0.84 to 5.35 f/cc over a 60-minute sampling period when compressed air was being used to blow out the asbestos-containing residue from the brake drum. In the same study, a peak concentration of 87 f/cc was measured for a few seconds during brake cleaning performed with compressed air. Rohl et al. (1976) (Ex. 90–148) measured area concentrations (of unspecified duration) within 3–5 feet of operations involving the cleaning of brakes with compressed air and obtained readings ranging from 6.6 to 29.8 f/cc. Because of the high exposure levels that result from cleaning brake and clutch parts using compressed air, OSHA has prohibited this practice in the revised standard.

Ineffective Methods

When dry brushing was used to remove the asbestos-containing residue from the brake drums and wheel assemblies, peak exposures measured by NIOSH ranged from 0.61 to 0.81 f/cc, while 8-hour TWA levels were at the new standard's permissible exposure limit (PEL) of 0.2 f/cc (Ex. 84–263). Rohl and his colleagues (Ex. 90–148) collected area samples 1–3 feet from a brake cleaning operation being performed with a dry brush, and measured concentrations ranging from 1.3 to 3.6 f/cc; however, sampling times and TWA concentrations were not presented in the Rohl et al. study.

When a brush wetted with water, gasoline, or Stoddart solvent was used to clean the asbestos-containing residue from the affected parts, exposure levels (8-hour TWAs) measured by NIOSH also exceeded the new 0.2 f/cc PEL, and peak exposures ranged as high as 2.62 f/cc (Ex. 84–263).

Preferred Methods

Use of an engineering control system involving a cylinder that completely encloses the brake shoe assembly and a High Efficiency Particulate Air (HEPA) filter-equipped vacuum produced 8-hour TWA employee exposures of 0.01 f/cc and peak exposures ranging from nondetectable to 0.07 f/cc (Ex. 84–263). (Because this system achieved exposure levels below the standard's action level, it is described in detail above.) Data collected by the Mount Sinai Medical Center (Ex. 90–148) for Nilfisk of America, Inc., the manufacturer of the brake assembly enclosure system, showed that for two of three operations sampled, the exposure of mechanics to airborne asbestos fibers was nondetectable. For the third operator sampled by Mt. Sinai researchers, the exposure was 0.5 f/cc, which the authors attributed to asbestos that had contaminated the operator's clothing in the course of previous brake repair operations performed without the enclosed cylinder/vacuum system.

Some automotive repair facilities use a compressed-air hose to apply a solvent mist to remove the asbestos-containing residue from the brake drums before repair. The NIOSH data (Ex. 84–263) indicated that mechanics employing this method experienced exposures (8-hour TWAs) of 0.8 f/cc, with peaks of 0.25 to 0.68 f/cc. This technique, and a variant of it that OSHA believes is both less costly and more effective in reducing employee exposures, is described in greater detail above in Sections A and B.

D. Summary

In conclusion, OSHA believes that it is likely that employers in the brake and clutch repair industry will be able to avail themselves of the action level trigger built into the revised standard if they conscientiously employ one of the three control methods described above: the enclosed cylinder/HEPA vacuum system, the compressed air/solvent method, or the spray can/solvent mist system.

Appendix G to § 1915.1001—Substance Technical Information for Asbestos—Non-Mandatory

I. Substance Identification

A. Substance: "Asbestos" is the name of a class of magnesium-silicate minerals that occur in fibrous form. Minerals that are included in this group are chrysotile, crocidolite, amosite, tremolite asbestos, anthophyllite asbestos, and actinolite asbestos.

B. Asbestos is used in the manufacture of heat-resistant clothing, automative brake and clutch linings, and a variety of building materials including floor tiles, roofing felts, ceiling tiles, asbestos-cement pipe and sheet, and fire-resistant drywall. Asbestos is also present in pipe and boiler insulation materials, and in sprayed-on materials located on beams, in crawlspaces, and between walls.

C. The potential for a product containing asbestos to release breatheable fibers depends on its degree of friability. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable, and they readily release airborne fibers if disturbed. Materials such as vinyl-asbestos floor tile or roofing felts are considered nonfriable and generally do not emit airborne fibers unless subjected to sanding or sawing operations. Asbestos-cement pipe or sheet can emit airborne fibers if the materials are cut or sawed, or if they are broken during demolition operations.

D. Permissible exposure: Exposure to airborne asbestos fibers may not exceed 0.2 fibers per cubic centimeter of air (0.2 f/cc) averaged over the 8-hour workday.

II. Health Hazard Data

A. Asbestos can cause disabling respiratory disease and various types of cancers if the fibers are inhaled. Inhaling or ingesting fibers from contaminated clothing or skin can also result in these diseases. The symptoms of these diseases generally do not appear for 20 or more years after initial exposure.

B. Exposure to asbestos has been shown to cause lung cancer, mesothelioma, and cancer of the stomach and colon. Mesothelioma is a rare cancer of the thin membrane lining of the chest and abdomen. Symptoms of mesothelioma include shortness of breath, pain in the walls of the chest, and/or abdominal pain.

III. Respirators and Protective Clothing

A. Respirators: You are required to wear a respirator when performing tasks that result in asbestos exposure that exceeds the permissible exposure limit (PEL) of 0.2 f/cc. These conditions can occur while your employer is in the process of installing engineering controls to reduce asbestos exposure, or where engineering controls are not feasible to reduce asbestos exposure. Air-purifying respirators equipped with a high-efficiency particulate air (HEPA) filter can be used where airborne asbestos fiber concentrations do not exceed 2 f/cc; otherwise, air-supplied, positive-pressure, full facepiece respirators must be used. Disposable respirators or dust masks are not permitted to be used for asbestos work. For effective protection, respirators must fit your face and head snugly. Your employer is required to conduct fit tests when you are first assigned a respirator and every 6 months thereafter. Respirators should not be loosened or removed in work situations where their use is required.

B. Protective Clothing: You are required to wear protective clothing in work areas where asbestos fiber concentrations exceed the permissible exposure limit (PEL) of 0.2 f/cc to prevent contamination of the skin. Where protective clothing is required, your employer must provide you with clean garments. Unless you are working on a large asbestos removal or demolition project, your employer must also provide a change room and separate lockers for your street clothes and contaminated work clothes. If you are working on a large asbestos removal or demolition project, and where it is feasible to do so, your employer must provide a clean room, shower, and decontamination room contiguous to the work area. When leaving the work area, you must remove contaminated clothing before proceeding to the shower. If the shower is not adjacent to the work area, you must vacuum your clothing before proceeding to the change room and shower. To prevent inhaling fibers in contaminated change rooms and showers, leave your respirator on until you leave the shower and enter the clean change room.

IV. Disposal Procedures and Cleanup

A. Wastes that are generated by processes where asbestos is present include:

1. Empty asbestos shipping containers.
2. Process wastes such as cuttings, trimmings, or reject material.
3. Housekeeping waste from sweeping or vacuuming.
4. Asbestos fireproofing or insulating material that is removed from buildings.
5. Building products that contain asbestos removed during building renovation or demolition.
6. Contaminated disposable protective clothing.

B. Empty shipping bags can be flattened under exhaust hoods and packed into airtight containers for disposal. Empty shipping drums are difficult to clean and should be sealed.

C. Vacuum bags or disposable paper filters should not be cleaned, but should be sprayed with a fine water mist and placed into a labeled waste container.

D. Process waste and housekeeping waste should be wetted with water or a mixture of water and surfactant prior to packaging in disposable containers.

E. Material containing asbestos that is removed from buildings must be disposed of in leak-tight 6-mil thick plastic bags, plastic-lined cardboard containers, or plastic-lined metal containers. These wastes, which are removed while wet, should be sealed in containers before they dry out to minimize the release of asbestos fibers during handling.

V. Access to Information

A. Each year, your employer is required to inform you of the information contained in this standard and appendices for asbestos. In addition, your employer must instruct you in the proper work practices for handling materials containing asbestos, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to asbestos. You or your representative has the right to observe employee measurements and to record the results obtained. Your employer is required to inform you of your exposure, and, if you are exposed above the permissible limit, he or she is required to inform you of the actions that are being taken to reduce your exposure to within the permissible limit.

C. Your employer is required to keep records of your exposures and medical examinations. These exposure records must be kept for at least thirty (30) years. Medical records must be kept for the period of your employment plus thirty (30) years.

D. Your employer is required to release your exposure and medical records to your physician or designated representative upon your written request.

Appendix H to § 1915.1001—Medical Surveillance Guidelines for Asbestos Non-Mandatory

I. Route of Entry Inhalation, Ingestion

II. Toxicology

Clinical evidence of the adverse effects associated with exposure to asbestos is present in the form of several well-conducted epidemiological studies of occupationally exposed workers, family contacts of workers, and persons living near asbestos mines. These studies have shown a definite association between exposure to asbestos and an increased incidence of lung cancer, pleural and peritoneal mesothelioma, gastrointestinal cancer, and asbestosis. The latter is a disabling fibrotic lung disease that is caused only by exposure to asbestos. Exposure to asbestos has also been associated with an increased incidence of esophageal, kidney, laryngeal, pharyngeal, and buccal cavity cancers. As with other known chronic occupational diseases, disease associated with asbestos generally appears about 20 years following the first occurrence of exposure: There are no known acute effects associated with exposure to asbestos.

Epidemiological studies indicate that the risk of lung cancer among exposed workers who smoke cigarettes is greatly increased over the risk of lung cancer among non-exposed smokers or exposed nonsmokers. These studies suggest that cessation of smoking will reduce the risk of lung cancer for a person exposed to asbestos but will not reduce it to the same level of risk as that existing for an exposed worker who has never smoked.

III. Signs and Symptoms of Exposure-Related Disease

The signs and symptoms of lung cancer or gastrointestinal cancer induced by exposure to asbestos are not unique, except that a chest X-ray of an exposed patient with lung cancer may show pleural plaques, pleural calcification, or pleural fibrosis. Symptoms characteristic of mesothelioma include shortness of breath, pain in the walls of the chest, or abdominal pain. Mesothelioma has a much longer latency period compared with lung cancer (40 years versus 15–20 years), and mesothelioma is therefore more likely to be found among workers who were first exposed to asbestos at an early age. Mesothelioma is always fatal.

Asbestosis is pulmonary fibrosis caused by the accumulation of asbestos fibers in the lungs. Symptoms include shortness of breath, coughing, fatigue, and vague feelings of sickness. When the fibrosis worsens, shortness of breath occurs even at rest. The diagnosis of asbestosis is based on a history of exposure to asbestos, the presence of characteristic radiologic changes, end-inspiratory crackles (rales), and other clinical features of fibrosing lung disease. Pleural plaques and thickening are observed on X-rays taken during the early stages of the disease. Asbestosis is often a progressive disease even in the absence of continued exposure, although this appears to be a highly individualized characteristic. In severe cases, death may be caused by respiratory or cardiac failure.

IV. Surveillance and Preventive Considerations

As noted above, exposure to asbestos has been linked to an increased risk of lung cancer, mesothelioma, gastrointestinal cancer, and asbestosis among occupationally exposed workers. Adequate screening tests to determine an employee's potential for developing serious chronic diseases, such as cancer, from exposure to asbestos do not presently exist. However, some tests, particularly chest X-rays and pulmonary function tests, may indicate that an employee has been overexposed to asbestos increasing his or her risk of developing exposure-related chronic diseases. It is important for the physician to become familiar with the operating conditions in which occupational exposure to asbestos is likely to occur. This is particularly important in evaluating medical and work histories and in conducting physical examinations. When an active employee has been identified as having been overexposed to asbestos, measures taken by the employer to eliminate or mitigate further exposure should also lower the risk of serious long-term consequences.

The employer is required to institute a medical surveillance program for all employees who are or will be exposed to asbestos at or above the action level (0.1 fiber per cubic centimeter of air). All examinations and procedures must be performed by or under the supervision of a licensed physician, at a reasonable time and place, and at no cost to the employee.

Although broad latitude is given to the physician in prescribing specific tests to be included in the medical surveillance program, OSHA requires inclusion of the following elements in the routine examination:

(i) Medical and work histories with special emphasis directed to symptoms of the respiratory system, cardiovascular system, and digestive tract.

(ii) Completion of the respiratory disease questionnaire contained in Appendix D.

(iii) A physical examination including a chest roentgenogram and pulmonary function test that includes measurement of the employee's forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1).

(iv) Any laboratory or other test that the examining physician deems by sound medical practice to be necessary.

The employer is required to make the prescribed tests available at least annually to those employees covered; more often than specified if recommended by the examining physician; and upon termination of employment.

The employer is required to provide the physician with the following information: A copy of this standard and appendices; a description of the mployee's duties as they relate to asbestos exposure; the employee's representative level of exposure to asbestos; a description of any personal protective and respiratory equipment used; and information from previous medical examinations of the affected employee that is not otherwise available to the physician. Making this information available to the physician will aid in the evaluation of the employee's health in relation to assigned duties and fitness to wear personal protective equipment, if required.

The employer is required to obtain a written opinion from the examining physician containing the results of the medical examination; the physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of exposure-related disease; any recommended limitations on the employee or on the use of personal protective equipment; and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions related to asbestos exposure that require further explanation or treatment. This written opinion must not reveal specific findings or diagnoses unrelated to exposure to asbestos, and a copy of the opinion must be provided to the affected employee.

Appendix I to § 1915.1001—Smoking Cessation Program Information For Asbestos—Non-Mandatory

The following organizations provide smoking cessation information and program material.

1. The National Cancer Institute operates a toll-free Cancer Information Service (CIS)

with trained personnel to help you. Call 1-800-4-CANCER* to reach the CIS office serving your area, or write: Office of Cancer Communications, National Cancer Institute, National Institutes of Health, Building 31, Room 10A24, Bethesda, Maryland 20892.

2. American Cancer Society, 3340 Peachtree Road, NE., Atlanta, Georgia 30062, (404) 320-3333.

The American Cancer Society (ACS) is a voluntary organization composed of 58 divisions and 3,100 local units. Through "The Great American Smokeout" in November, the annual Cancer Crusade in April, and numerous educational materials, ACS helps people learn about the health hazards of smoking and become successful ex-smokers.

3. American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231, (214) 750-5300.

The American Heart Association (AHA) is a voluntary organization with 130,000 members (physicians, scientists, and laypersons) in 55 state and regional groups. AHA produces a variety of publications and audiovisual materials about the effects of smoking on the heart. AHA also has developed a guidebook for incorporating a weight-control component into smoking cessation programs.

4. American Lung Association, 1740 Broadway, New York, New York 10019, (212) 245-8000.

A voluntary organization of 7,500 members (physicians, nurses, and laypersons), the American Lung Association (ALA) conducts numerous public information programs about the health effect of smoking. ALA has 59 state and 85 local units. The organization actively supports legislation and information campaigns for non-smokers' rights and provides help for smokers who want to quit, for example, through "Freedom From Smoking," a self-help smoking cessation program.

5. Office on Smoking and Health, U.S. Department of Health and, Human Services, 5600 Fishers Lane, Park Building, Room 110, Rockville, Maryland 20857.

The Office on Smoking and Health (OSH) is the Department of Health and Human Services' lead agency in smoking control. OSH has sponsored distribution of publications on smoking-realted topics, such as free flyers on relapse after initial quitting, helping a friend or family member quit smoking, the health hazards of smoking, and the effects of parental smoking on teenagers.

*In Hawaii, on Oahu call 524-1234 (call collect from neighboring islands),

Spanish-speaking staff members are available during daytime hours to callers from the following areas: California, Florida, Georgia, Illinois, New Jersey (area code 210), New York, and Texas. Consult your local telephone directory for listings of local chapters.

(Reporting and recordkeeping requirements in paragraphs (d)(2), (3), (5), and (7), (f)(2) and (3)(i), (j)(5), (l), and (m) as they apply to the excursion limit have been approved by the Office of Management and Budget under control numbers 1218-0133 and 1218-0134. The OMB clearance expires on February 29, 1992.)

(Reporting and recordkeeping requirements in paragraph (j)(5)(iv)(C) have received OMB paperwork clearance under OMB clearance number 1218-0133. The OMB clearance expires on April 30, 1993.)

(Approved by the Office of Management and Budget under control number 1218-0133)

§ 1915.1002 Coal tar pitch volatiles; interpretation of term.

As used in § 1915.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the "coal tar pitch volatiles" standard.

§ 1915.1003 4-Nitrobiphenyl.

(a) *Scope and application.* (1) This section applies to any area in which 4-Nitrobiphenyl, Chemical Abstracts Service Registry Number 92933 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of 4-Nitrobiphenyl.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of 4-Nitrobiphenyl. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving 4-Nitrobiphenyl where containment prevents the release of 4-Nitrobiphenyl into regulated areas, non-regulated areas, or the external environment.

(5) *Decontamination* means the inactivation of 4-Nitrobiphenyl or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of 4-Nitrobiphenyl from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of 4-Nitrobiphenyl which may result in exposure to or contact with 4-Nitrobiphenyl.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of 4-Nitrobiphenyl, which is impervious to the passage of 4-Nitrobiphenyl, and which would prevent the entry of 4-Nitrobiphenyl into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 4-Nitrobiphenyl within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving 4-Nitrobiphenyl in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 4-Nitrobiphenyl into regulated areas, non-regulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to 4-Nitrobiphenyl.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) "Requirements for areas containing 4-Nitrobiphenyl." A regulated area shall be established by an employer where 4-Nitrobiphenyl is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with 4-Nitrobiphenyl within an isolated system such as a "glove box" shall wash their hands and arms upon completion of the assigned task and

before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where 4-Nitrobiphenyl is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while 4-Nitrobiphenyl is contained within: (i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where 4-Nitrobiphenyl is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in 4-Nitrobiphenyl handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with 4-Nitrobiphenyl could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with 4-Nitrobiphenyl such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment, clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 4-Nitrobiphenyl from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of 4-Nitrobiphenyl and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and

(c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of 4-Nitrobiphenyl and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have 4-Nitrobiphenyl contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance. *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of 4-Nitrobiphenyl, including local and systemic toxicity;

(B) The specific nature of the operation involving 4-Nitrobiphenyl which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 4-Nitrobiphenyl;

(H) The purpose for and application of specific first aid procedures and practices;

(i) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of 4-Nitrobiphenyl in each regulated area.

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which 4-Nitrobiphenyl is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of 4-Nitrobiphenyl into any area where employees may be potentially exposed shall be reported in accordance with this paragraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0085)

§1915.1004 alpha-Naphthylamine.

(a) *Scope and application.* (1) This section applies to any area in which alpha-Naphthylamine, Chemical Abstracts Service Registry Number 134327 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to transshipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight or volume of alpha-Naphthylamine.

(3) This section will not apply to operations involving the destructive distillation of carbonaceous materials, such as occurs in coke ovens.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of alpha-Naphthylamine. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving alpha-Naphthylamine where containment prevents the release of alpha-Naphthylamine into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of alpha-Naphthylamine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of alpha-Naphthylamine from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of alpha-Naphthylamine which may result in exposure to or contact with alpha-Naphthylamine.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of alpha-Naphthylamine, which is impervious to the passage of alpha-Naphthylamine, and which would prevent the entry of alpha-Naphthylamine into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving alpha-Naphthylamine within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving alpha-Naphthylamine in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of alpha-Naphthylamine into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to alpha-Naphthylamine.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing alpha-Naphthylamine.* A regulated area shall be established by an employer where alpha-Naphthylamine is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with alpha-Naphthylamine within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where alpha-Naphthylamine is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while alpha-Naphthylamine is contained within: (i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where alpha-Naphthylamine is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), and shoe covers and gloves prior to entering a regulated area.

(iv) Employees engaged in alpha-Naphthylamine handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exist of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with alpha-Naphthylamine could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected areas shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with alpha-Naphthylamine, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove alpha-Naphthylamine from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of alpha-Naphthylamine and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of alpha-Naphthylamine and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have alpha-Naphthylamine contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of alpha-Naphthylamine, including local and systemic toxicity;

(B) The specific nature of the operation involving alpha-Naphthylamine which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of alpha-Naphthylamine;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations*. Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of alpha-Naphthylamine in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which alpha-Naphthylamine is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents*. Incidents which result in the release of alpha-Naphthylamine into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph.

(i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance*. At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations*. (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records*. (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0084)

§ 1915.1005 [Reserved]

§ 1915.1006 Methyl chloromethyl ether.

(a) *Scope and application*. (1) This section applies to any area in which methyl chloromethyl ether, Chemical Abstracts Service Registry Number 107302 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to transshipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of methyl chloromethyl ether.

(b) *Definitions*. For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of methyl chloromethyl ether. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving methyl chloromethyl ether where containment prevents the release of methyl chloromethyl ether into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of methyl chloromethyl ether or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of methyl chloromethyl ether from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of methyl chloromethyl ether which may result in exposure to or contact with methyl chloromethyl ether.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of methyl chloromethyl ether, which is impervious to the passage of methyl chloromethyl ether, and which would prevent the entry of methyl chloromethyl ether into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving methyl chloromethyl ether within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving methyl chloromethyl ether in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of methyl chloromethyl ether into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to methyl chloromethyl ether.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing methyl chloromethyl ether.* A regulated area shall be established by an employer where methyl chloromethyl ether is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with methyl chloromethyl ether within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where methyl chloromethyl ether is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while methyl chloromethyl ether is contained within. Access shall be restricted to authorized employees only.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where methyl chloromethyl ether is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), and gloves prior to entering the regulated area.

(iv) Employees engaged in methyl chloromethyl ether handling operations shall be provided with and required to wear and use a full-face, supplied air respirator, of the continuous flow or pressure-demand type, in accordance with § 1910.134.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with methyl chloromethyl ether could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with methyl chloromethyl ether, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees wear protective clothing and equipment, clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(iii) Where toilets are in regulated areas, such toilets shall be in a separate room.

(iv) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(v) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a

regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove methyl chloromethyl ether from the surfaces of materials, equipment and the decontamination facility.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of methyl chloromethyl ether and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of methyl chloromethyl ether and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii) (B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have methyl chloromethyl ether contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of methyl chloromethyl ether, including local and systemic toxicity;

(B) The specific nature of the operation involving methyl chloromethyl ether which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of methyl chloromethyl ether;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of methyl chloromethyl ether in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which methyl chloromethyl ether is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of methyl chloromethyl ether into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph.

(i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances be taken, with specific completion dates, of the incident, and measures taken or to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than

annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0086)

§ 1915.1007 3,3′-Dichlorobenzidine (and its salts).

(a) *Scope and application.* (1) This section applies to any area in which 3,3′-Dichlorobenzidine (or its salts), Chemical Abstracts Service Registry Number 91941 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e)(2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1 percent by weight or volume of 3,3′-Dichlorobenzidine (or its salts).

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of 3,3′-Dichlorobenzidine (or its salts). The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving 3,3′-Dichlorobenzidine (or its salts) where containment prevents the release of 3,3′-Dichlorobenzidine (or its salts) into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of 3,3′-Dichlorobenzidine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of 3,3′-Dichlorobenzidine (or its salts) from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of 3,3′-Dichlorobenzidine (or its salts) which may result in exposure to or contact with 3,3′-Dichlorobenzidine (or its salts).

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment, of 3,3′-Dichlorobenzidine (or its salts), which is impervious to the passage of 3,3′-Dichlorobenzidine (or its salts) and which would prevent the entry of 3,3′-Dichlorobenzidine (or its salts) into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 3,3′-Dichlorobenzidine (or its salts) within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving 3,3′-Dichlorobenzidine (or its salts) in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 3,3′-Dichlorobenzidine (or its salts) into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to 3,3′-Dichlorobenzidine (or its salts).

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing 3,3′-Dichlorobenzidine (or its salts).* A regulated area shall be established by an employer where 3,3′-Dichlorobenzidine (or its salts) is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with 3,3′-Dichlorobenzidine (or its salts) within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where 3,3′-Dichlorobenzidine (or its salts) is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while 3,3′-Dichlorobenzidine (or its salts) is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where 3,3′-Dichlorobenzidine (or its salts) is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in 3,3'-Dichlorobenzidine (or its salts) handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with 3,3'-Dichlorobenzidine (or its salts) could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with 3,3'-Dichlorobenzidine (or its salts), such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 3,3'-Dichlorobenzidine (or its salts) from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of 3,3'-Dichlorobenzidine (or its salts) and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of 3,3'-Dichlorobenzidine (or its salts) and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have 3,3'-Dichlorobenzidine (or its salts) contents with corrosive or irritating properties shall have label statements warning of

such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to:

(A) The nature of the carcinogenic hazards of 3,3′-Dichlorobenzidine (or its salts), including local and systemic toxicity;

(B) The specific nature of the operation involving 3,3′-Dichlorobenzidine (or its salts) which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 3,3′-Dichlorobenzidine (or its salts);

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of 3,3′-Dichlorobenzidine (or its salts) in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which 3,3′-Dichlorobenzidine (or its salts) is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of 3,3′-Dichlorobenzidine (or its salts) into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination, and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids of cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0083)

§ 1915.1008 bis-Chloromethyl ether.

(a) *Scope and application.* (1) This section applies to any area in which bis-chloromethyl ether, Chemical Abstracts Service Registry Number 542881 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e)(2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of bis-chloromethyl ether.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to

be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of bis-chloromethyl ether. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving bis-chloromethyl ether where containment prevents the release of bis-chloromethyl ether into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of bis-chloromethyl ether or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of bis-chloromethyl ether from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of bis-chloromethyl ether which may result in exposure to or contact with bis-chloromethyl ether.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment, of bis-chloromethyl ether, which is impervious to the passage of, bis-chloromethyl ether and which would prevent the entry of bis-chloromethyl ether into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving bis-chloromethyl ether within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving bis-chloromethyl ether in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of bis-chloromethyl ether into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to bis-chloromethyl ether.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing bis-chloromethyl ether.* A regulated area shall be established by an employer where bis-chloromethyl ether is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with bis-chloromethyl ether within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where bis-chloromethyl ether is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while bis-chloromethyl ether is contained within. Access shall be restricted to authorized employees only.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where bis-chloromethyl ether is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this paragraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), and gloves prior to entering the regulated area.

(iv) Employees engaged in bis-chloromethyl ether handling operations shall be provided with and required to wear and use a full-face, supplied air respirator, of the continuous flow or pressure-demand type, in accordance with § 1910.134.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e)(2), (3), and (4) of this section.

(vi) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with bis-chloromethyl ether could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be

included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with bis-chloromethyl ether such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(iii) Where toilets are in regulated areas, such toilets shall be in a separate room.

(iv) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(v) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove bis-chloromethyl ether from the surfaces of materials, equipment and the decontamination facility.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identifications.* (i) Containers of bis-chloromethyl ether and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of bis-chloromethyl ether and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have bis-chloromethyl ether contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by subparagraph (1) of this paragraph shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of bis-chloromethyl ether, including local and systemic toxicity;

(B) The specific nature of the operation involving bis-chloromethyl ether which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of bis-chloromethyl ether;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and inplant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of bis-chloromethyl ether in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which bis-chloromethyl ether is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of bis-chloromethyl ether into any area where employees may be

potentially exposed shall be reported in accordance with this subparagraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0087)

§ 1915.1009 beta-Naphthylamine.

(a) *Scope and application.* (1) This section applies to any area in which beta-Naphthylamine, Chemical Abstracts Service Registry Number 91598 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to transshipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of beta-Naphthylamine.

(3) This section will not apply to operations involving the destructive distillation of carbonaceous materials, such as occurs in coke ovens.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of beta-Naphthylamine. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving beta-Naphthylamine where containment prevents the release of beta-Naphthylamine into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of beta-Naphthylamine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of beta-Naphthylamine from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of beta-Naphthylamine which may result in exposure to or contact with beta-Naphthylamine.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of beta-Naphthylamine, which is impervious to the passage of beta-Naphthylamine, and which would prevent the entry of beta-Naphthylamine into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving beta-Naphthylamine within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving beta-Naphthylamine in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of beta-Naphthylamine into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to beta-Naphthylamine.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing beta-Naphthylamine.* A regulated area shall be established by an employer where beta-Naphthylamine is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved: (1) *Isolated systems.* Employees working

with beta-Naphthylamine within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where beta-Naphthylamine is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while beta-Napthylamine is contained within (i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where beta-Naphthylamine is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this paragraph shall apply.

(i) Access shall be restricted to authorized employees only.

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in beta-Naphthylamine handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with beta-Naphthylamine could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air suppled hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with beta-Napthylamine, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove beta-Naphthylamine from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of beta-Naphthylamine

and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of beta-Naphthylamine and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have beta-Naphthylamine contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of beta-Naphthylamine, including local and systemic toxicity;

(B) The specific nature of the operation involving beta-Naphthylamine which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of beta-Naphthylamine;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of beta-Naphthylamine in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which beta-Naphthylamine is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of beta-Naphthylamine into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination;

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability

for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0089)

§ 1915.1010 Benzidine.

(a) *Scope and application.* (1) This section applies to any area in which Benzidine, Chemical Abstracts Service Registry Number 92875 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to transshipment in sealed containers, except for the labeling requirements under paragraphs (e)(2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixutures containing less than 0.1 percent by weight or volume in Benzidine.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono dispense aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of Benzidine. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving Benzidine where containment prevents the release of Benzidine into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of Benzidine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of Benzidine from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of Benzidine which may result in exposure to or contact with Benzidine.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of Benzidine, which is impervious to the passage of Benzidine, and which would prevent the entry of Benzidine into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving Benzidine within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving Benzidine in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of Benzidine into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to Benzidine.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing Benzidine.* A regulated area shall be established by an employer where Benzidine is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with Benzidine within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where Benzidine is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while Benzidine is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where Benzidine is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply. (i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in Benzidine handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e)(2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with Benzidine could result, each authorized employee entering that area shall: (i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with Benzidine such employee shall be required to shower as soon as possible unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove Benzidine from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of Benzidine and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of Benzidine and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have Benzidine contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of Benzidine, including local and systemic toxicity;

(B) The specific nature of the operation involving Benzidine which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of Benzidine;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported

in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change. (i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of Benzidine in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which Benzidine is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of Benzidine into any area where employees may be potentially exposed shall be reported in accordance with this paragraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0082)

§ 1915.1011 4-Aminodiphenyl.

(a) *Scope and application.* (1) This section applies to any area in which 4-Aminodiphenyl, Chemical Abstracts Service Registry Number 92671 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 0.1 percent by weight or volume of 4-Aminodiphenyl.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of 4-Aminodiphenyl. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving 4-Aminodiphenyl where containment prevents the release of 4-Aminodiphenyl into regulated areas, nonregulated area, or the external environment.

(5) *Decontamination* means the inactivation of 4-Aminodiphenyl or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of 4-Aminodiphenyl from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of 4-Aminodiphenyl which may result in exposure to or contact with 4-Aminodiphenyl.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of 4-Aminodiphenyl, which is imperivious to the passage of 4-Aminodiphenyl, and which would prevent the entry of 4-Aminodiphenyl into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 4-Aminodiphenyl within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving 4-Aminodiphenyl in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 4-Aminodiphenyl into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an

employee against contact with or exposure to 4-Aminodiphenyl.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing 4-Aminodiphenyl.* A regulated area shall be established by an employer where 4-Aminodiphenyl is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with 4-Aminodiphenyl within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where 4-Aminodiphenyl is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while 4-Aminodiphenyl is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where 4-Aminodiphenyl is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in 4-Aminodiphenyl handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with 4-Aminodiphenyl could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air suppled hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with 4-Aminodiphenyl such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 4-Aminodiphenyl from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT

AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in

paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA

IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES

AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of 4-Aminodiphenyl and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of 4-Aminodiphenyl and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have 4-Aminodiphenyl contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by subparagraph (1) shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive including, but not necessarily limited to: A training and indoctrination program (A) The nature of the carcinogenic hazards of 4-Aminodiphenyl, including local and systemic toxicity;

(B) The specific nature of the operation involving 4-Aminodiphenyl which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 4-Aminodiphenyl;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in this application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change. (i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of 4-Aminodiphenyl in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which 4-Aminodiphenyl is present in each regulated area; e.g. whether it is manufactured, processed, used repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of 4-Aminodiphenyl into any area where employees may be potentially exposed shall be reported in accordance with this paragraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor,

records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0090)

§ 1915.1012 Ethyleneimine.

(a) *Scope and application.* (1) This section applies to any area in which Ethyleneimine, Chemical Abstracts Service Registry Number 151564 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight or volume of Ethyleneimine.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 µm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of Ethyleneimine. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving Ethyleneimine where containment prevents the release of Ethyleneimine into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of Ethyleneimine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of Ethyleneimine from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of Ethyleneimine which may result in exposure to or contact with Ethyleneimine.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of Ethyleneimine, which is impervious to the passage of Ethyleneimine, and which would prevent the entry of Ethyleneimine into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving Ethyleneimine within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving Ethyleneimine in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of Ethyleneimine into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to Ethyleneimine.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing Ethyleneimine.* A regulated area shall be established by an employer where Ethyleneimine is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with Ethyleneimine within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where Ethyleneimine is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while Ethyleneimine is contained within: Access shall be restricted to authorized employees only.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where Ethyleneimine is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), and gloves prior to entering the regulated area.

(iv) Employees engaged in Ethyleneimine handling operations shall be provided with and required to wear and use a full-face, supplied air respirator, of the continuous flow or pressure-demand type, in accordance with § 1910.134.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on

contaminated systems or equipment, where direct contact with Ethyleneimine could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented. (i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with Ethyleneimine, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(vi) Emergency deluge showers and eyewash fountains supplied with running potable water shall be located near, within sight of, and on the same level with locations where a direct exposure of Ethyleneimine would be most likely as a result of equipment failure, or improper work practice.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(iii) Where toilets are in regulated areas, such toilets shall be in a separate room.

(iv) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(v) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove Ethyleneimine from the surfaces of materials, equipment and the decontamination facility.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT

AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA

IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES

AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of Ethyleneimine and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of Ethyleneimine and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii) (B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)5 of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have Ethyleneimine contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of Ethyleneimine, including local and systemic toxicity;

(B) The specific nature of the operation involving Ethyleneimine which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of Ethyleneimine;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change. (i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of Ethyleneimine in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which Ethyleneimine is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of Ethyleneimine into any area where employees may be potentially exposed shall be reported in accordance with this paragraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0080)

§ 1915.1013 beta-Propiolactone.

(a) *Scope and application.* (1) This section applies to any area in which beta-Propiolactone, Chemical Abstracts Service Registry Number 57578 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight or volume of beta-Propiolactone.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of beta-Propiolactone. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving beta-Propiolactone where containment prevents the release of beta-Propiolactone into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of beta-Propiolactone or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of beta-Propiolactone from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of beta-Propiolactone which may result in exposure to or contact with beta-Propiolactone.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of beta-Propiolactone, which is impervious to the passage of beta-Propiolactone, and which would prevent the entry of beta-Propiolactone into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute;

designed, constructed, and maintained in such a way that an operation involving beta-Propiolactone within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving beta-Propiolactone in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of beta-Propiolactone into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to beta-Propiolactone.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing beta-Propiolactone.* A regulated area shall be established by an employer where beta-Propiolactone is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with beta-Propiolactone within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where beta-Propiolactone is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while beta-Propiolactone is contained within. Access shall be restricted to authorized employees only.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where beta-Propiolactone is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in beta-Propiolactone handling operations shall be provided with and required to wear and use a full-face, supplied air respirator, of the continuous flow or pressure-demand type, in accordance with § 1910.134.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e)(2), (3), and (4) of this section.

(vi) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with beta-Propiolactone could result, each authorized employee entering that area shall: (i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with beta-Propiolactone, such employee shall be required to shower soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(vi) Emergency deluge showers and eyewash fountains supplied with running potable water shall be located near, within sight of, and on the same level with locations where a direct exposure to beta-Propiolactone would be most likely as a result of equipment failure, or improper work practice.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(iii) Where toilets are in regulated areas, such toilets shall be in a separate room.

(iv) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(v) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause

contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove beta-Propiolactone from the surfaces of materials, equipment and the decontamination facility.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of beta-Propiolactone and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of beta-Propiolactone and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have beta-Propiolactone contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) shall be a minimum letter height of 2 inches. Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to:

(A) The nature of the carcinogenic hazards of beta-Propiolactone, including local and systemic toxicity;

(B) The specific nature of the operation involving beta-Propiolactone which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of beta-Propiolactone;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of beta-Propiolactone in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which beta-Propiolactone is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of beta-Propiolactone into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph. (i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include: (A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of

increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agent, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0079)

§1915.1014 2-Acetylaminofluorene.

(a) *Scope and application.* (1) This section applies to any area in which 2-Acetylaminofluorene, Chemical Abstracts Service Registry Number 53963 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e)(2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight or volume of 2-Acetylamino fluorene.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of 2-Acetylaminofluorene. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving 2-Acetylaminofluorene where containment prevents the release of 2-Acetylaminofluorene into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of 2-Acetylaminofluorene or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of 2-Acetylaminofluorene from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of 2-Acetylaminofluorene which may result in exposure to or contact with 2-Acetylaminofluorene.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of 2-Acetylaminofluorene, which is impervious to the passage of 2-Acetylaminofluorene, and which would prevent the entry of 2-Acetylaminofluorene into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 2-Acetylaminoflourene within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving 2-Acetylaminofluorene in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 2-Acetylaminofluorene into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to 2-Acetylaminofluorene.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing 2-Acetylaminofluorene.* A regulated area shall be established by an employer where 2-Acetylaminofluorene is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance wtih the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with 2-Acetylaminofluorene within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where 2-Acetylaminofluorene is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while 2-Acetylaminofluorene is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where 2-Acetylaminofluorene is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full

body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.

(iv) Employees engaged in 2-Acetylaminofluorene handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e)(2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with 2-Acetylaminofluorene could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with apragraph (f)(2) of this section.

(iv) Where an employee has a known contact with 2-Acetylaminofluorene, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 2-Acetylaminofluorene from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of 2-Acetylaminofluorene and containers required under paragraphs (c)(4)(v) and (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification, limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of 2-Acetylaminofluorene and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by, employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have 2-Acetylaminofluorene contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by subparagraph (1) shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance; *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any

required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to: (A) The nature of the carcinogenic hazards of 2-Acetylaminofluorene, including local and systemic toxicity;

(B) The specific nature of the operation involving 2-Acetylaminofluorene which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 2-Acetylaminofluorene;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees, shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of 2-Acetylaminofluorene in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which 2-Acetylaminofluorene is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of 2-Acetylaminofluorene into any area where employees may be potentially exposed shall be reported in accordance with this subparagraph.

(i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0088)

§ 1915.1015 4-Dimethylaminoazobenzene.

(a) *Scope and application.* (1) This section applies to any area in which 4-Dimethylaminoazobenzene, Chemical Abstracts Service Registry Number 60117 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight or volume of 4-Dimethylaminoazobenzene.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of 4-Dimethylaminoazobenzene. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving 4-Dimeth- ylaminoazo-benzene where containment prevents the release of 4-Dimethylaminoazobenzene into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of 4-Dimethylaminoazobenzene or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of 4-Dimethylaminoazobenzene from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of 4-Dimethylaminoazobenzene which may result in exposure to or contact with 4-Dimethylaminoazobenzene.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of 4-Dimethylaminoazobenzene, which is impervious to the passage of 4-Dimethylaminoazobenzene which would prevent the entry of 4-Dimethylaminoazobenzene into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving 4-Dimethylaminoazobenzene within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(13) *Open-vessel system* means an operation involving 4-Dimethylaminoazobenzene in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 4-Dimethylaminoazobenzene into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to 4-Dimethylaminoazobenzene.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing 4-Dimethylaminoazobenzene.* A regulated area shall be established by an employer where 4-Dimethylaminoazobenzene is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with 4-Dimethylaminoazobenzene within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where 4-Dimethylaminoazobenzene is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while 4-Dimethylaminoazobenzene is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where 4-Dimethylaminoazobenzene is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers, and gloves prior to entering the regulated area.

(iv) Employees engaged in 4-Dimethylaminoazobenzene handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e) (2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exist of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with 4-Dimethylaminoazobenzene could result, each authorized employee entering that area shall: (i) Be provided with and required to wear clear, impervious garments, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of

the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with 4-Dimethylaminoazobenzene, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change room shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove 4-Dimethylaminoazobenzene from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA
IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES
AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of 4-Dimethylaminoazobenzene and containers required under paragraph (c)(4)(v) and (c)(6)(vii) (B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of 4-Dimethylaminoazobenzene and containers required under paragraphs (c)(4)(v), (c)(6)(vii) (B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have 4-Dimethylaminoazobenzene contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by subparagraph (1) of this paragraph shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to:

(A) The nature of the carcinogenic hazards of 4-Dimethylamino-azobenzene, including local and sytemic toxicity;

(B) The specific nature of the operation involving 4-Dimethylaminoazo-benzene which could result in exposure;

(C) The purpose for the application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose for and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 4-Dimethylaminoazobenzene;

(H) The purpose for and application of specific first aid procedures and practices;

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of 4-Dimethylaminoazobenzene in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which 4-Dimethyaminoazobenzene is present in

each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of 4-Dimethylaminoazobenzene into any area where employees may be potentially exposed shall be reported in accordance with this paragraph.

(i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examination, the examing physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examination. Records shall be maintained for the duration of the employee's employment. Upon termination of the employee's employment, including retirement or death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0044)

§ 1915.1016 N-Nitrosodimethylamine.

(a) *Scope and application.* (1) This section applies to any area in which N-Nitrosodimethylamine, Chemical Abstracts Service Registry Number 62759 is manufactured, processed, repackaged, released, handled, or stored, but shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (e) (2), (3), and (4) of this section.

(2) This section shall not apply to solid or liquid mixtures containing less than 1.0% by weight or volume of N-Nitrosodimethylamine.

(b) *Definitions.* For the purposes of this section: (1) *Absolute filter* is one capable of retaining 99.97 percent of a mono disperse aerosol of 0.3 μm particles.

(2) *Authorized employee* means an employee whose duties require him to be in the regulated area and who has been specifically assigned by the employer.

(3) *Clean change room* means a room where employees put on clean clothing and/or protective equipment in an environment free of N-Nitrosodimethylamine. The clean change room shall be contiguous to and have an entry from a shower room, when the shower room facilities are otherwise required in this section.

(4) *Closed system* means an operation involving N-Nitrosodimethyl- amine where containment prevents the release of N-Nitrosodimethylamine into regulated areas, nonregulated areas, or the external environment.

(5) *Decontamination* means the inactivation of N-Nitrosodimethylamine or its safe disposal.

(6) *Director* means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health and Human Services to act for the Director.

(7) *Disposal* means the safe removal of N-Nitrosodimethylamine from the work environment.

(8) *Emergency* means an unforeseen circumstance or set of circumstances resulting in the release of N-Nitrosodimethylamine which may result in exposure to or contact with N-Nitrosodimethylamine.

(9) *External environment* means any environment external to regulated and nonregulated areas.

(10) *Isolated system* means a fully enclosed structure other than the vessel of containment of N-Nitrosodimethylamine, which is impervious to the passage of N-Nitrosodimethylamine, and which would prevent the entry of N-Nitrosodimethylamine into regulated areas, nonregulated areas, or the external environment, should leakage or spillage from the vessel of containment occur.

(11) *Laboratory type hood* is a device enclosed on three sides and the top and bottom, designed and maintained so as to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; designed, constructed, and maintained in such a way that an operation involving N-Nitrosodimeth-ylamine within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(12) *Nonregulated area* means any area under the control of the employer where entry and exit is neither restriced nor controlled.

(13) *Open-vessel system* means an operation involving N-Nitrosodimethylamine in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of N-Nitrosodimethylamine into regulated areas, nonregulated areas, or the external environment.

(14) *Protective clothing* means clothing designed to protect an employee against contact with or exposure to N-Nitrosodimethylamine.

(15) *Regulated area* means an area where entry and exit is restricted and controlled.

(c) *Requirements for areas containing N-Nitrosodimethylamine.* A regulated area shall be established by an employer

where N-Nitrosodimethylamine is manufactured, processed, used, repackaged, released, handled or stored. All such areas shall be controlled in accordance with the requirements for the following category or categories describing the operation involved:

(1) *Isolated systems.* Employees working with N-Nitrosodimethylamine within an isolated system, such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(2) *Closed system operation.* Within regulated areas where N-Nitrosodimethylamine is stored in sealed containers, or contained in a closed system, including piping systems, with any sample ports or openings closed while N-Nitrosodimethylamine is contained within:

(i) Access shall be restricted to authorized employees only;

(ii) Employees shall be required to wash hands, forearms, face and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(3) *Open vessel system operations.* Open vessel system operations as defined in paragraph (b)(13) of this section are prohibited.

(4) *Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system.* In operations involving "laboratory type hoods," or in locations where N-Nitrosodimethylamine is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this subparagraph shall apply.

(i) Access shall be restricted to authorized employees only;

(ii) Each operation shall be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.

(iii) Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers, and gloves prior to entering the regulated area.

(iv) Employees engaged in N-Nitrosodimethylamine handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with § 1910.134. A respirator affording higher levels of protection may be substituted.

(v) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers shall be identified, as required under paragraphs (e)(2), (3), and (4) of this section.

(vi) Employees shall be required to wash hands, forearms, face and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.

(vii) Employees shall be required to shower after the last exit of the day.

(viii) Drinking fountains are prohibited in the regulated area.

(5) *Maintenance and decontamination activities.* In cleanup of leaks or spills, maintenance or repair operations on contaminated systems or equipment, where direct contact with N-Nitrosodimethylamine could result, each authorized employee entering that area shall:

(i) Be provided with and required to wear clean, impervious garment, including gloves, boots and continuous-air supplied hood in accordance with § 1910.134.

(ii) Be decontaminated before removing the protective garments and hood;

(iii) Be required to shower upon removing the protective garments and hood.

(d) *General regulated area requirements.*

(1) [Reserved]

(2) *Emergencies.* In an emergency, immediate measures including, but not limited to, the requirements of paragraphs (d)(2) (i), (ii), (iii), (iv), and (v) of this section shall be implemented.

(i) The potentially affected area shall be evacuated as soon as the emergency has been determined.

(ii) Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

(iii) Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (f)(2) of this section.

(iv) Where an employee has a known contact with N–Nitrosodimethylamine, such employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

(v) An incident report on the emergency shall be reported as provided in paragraph (f)(2) of this section.

(3) *Hygiene facilities and practices.* (i) Storage or consumption of food, storage or use of containers of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of such products, are prohibited in regulated areas.

(ii) Where employees are required by this section to wash, washing facilities shall be provided in accordance with § 1910.141(d) (1) and (2) (ii) through (vii).

(iii) Where employees are required by this section to shower, shower facilities shall be provided in accordance with § 1910.141(d)(3).

(iv) Where employees wear protective clothing and equipment clean change rooms shall be provided, in accordance with § 1910.141(e), for the number of such employees required to change clothes.

(v) Where toilets are in regulated areas, such toilets shall be in a separate room.

(4) *Contamination control.* (i) Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean make-up air in equal volume shall replace air removed.

(ii) Any equipment, material, or other item taken into or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

(iii) Decontamination procedures shall be established and implemented to remove N-Nitrosodimethylamine from the surfaces of materials, equipment and the decontamination facility.

(iv) Dry sweeping and dry mopping are prohibited.

(e) *Signs, information and training*—(1) *Signs.* (i) Entrances to regulated areas shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT

AUTHORIZED PERSONNEL ONLY

(ii) Entrances to regulated areas containing operations covered in paragraph (c)(5) of this section shall be posted with signs bearing the legend:

CANCER-SUSPECT AGENT EXPOSED IN THIS AREA

IMPERVIOUS SUIT INCLUDING GLOVES, BOOTS, AND AIR-SUPPLIED HOOD REQUIRED AT ALL TIMES

AUTHORIZED PERSONNEL ONLY

(iii) Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that must be followed in entering and leaving a regulated area.

(2) *Container contents identification.* (i) Containers of N-Nitrosodimethylamine and containers required under paragraphs (c)(4)(v) and (c)(6)(vii) (B), and (c)(6)(viii)(B) of this section which are accessible only to, and handled only by, authorized employees, or by other employees trained in accordance with paragraph (e)(5) of this section, may have contents identification limited to a generic or proprietary name, or other proprietary identification, of the carcinogen and percent.

(ii) Containers of N-Nitrosodimethylamine and containers required under paragraphs (c)(4)(v), (c)(6)(vii)(B), and (c)(6)(viii)(B) of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e)(5) of this section shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (a)(1) of this section.

(iii) Containers shall have the warning words "CANCER-SUSPECT AGENT" displayed immediately under or adjacent to the contents identification.

(iv) Containers which have N-Nitrosodimethylamine contents with corrosive or irritating properties shall have label statements warning of such hazards, noting, if appropriate, particularly sensitive or affected portions of the body.

(3) *Lettering.* Lettering on signs and instructions required by paragraph (e)(1) of this section shall be a minimum letter height of 2 inches (5.08 cm). Labels on containers required under this section shall not be less than ½ the size of the largest lettering on the package, and not less than 8 point type in any instance: *Provided,* That no such required lettering need be more than 1 inch (2.54 cm) in height.

(4) *Prohibited statements.* No statement shall appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information or instruction.

(5) *Training and indoctrination.* (i) Each employee prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to:

(A) The nature of the carcinogenic hazards of N-Nitrosodimethylamine, including local and systemic toxicity;

(B) The specific nature of the operation involving N-Nitrosodimethylamine which could result in exposure;

(C) The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;

(D) The purpose of and application of decontamination practices and purposes;

(E) The purpose for and significance of emergency practices and procedures;

(F) The employee's specific role in emergency procedures;

(G) Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of N-Nitrosodimethylamine;

(H) The purpose for and application of specific first aid procedures and practices.

(I) A review of this section at the employee's first training and indoctrination program and annually thereafter.

(ii) Specific emergency procedures shall be prescribed, and posted, and employees shall be familiarized with their terms, and rehearsed in their application.

(iii) All materials relating to the program shall be provided upon request to authorized representatives of the Assistant Secretary and the Director.

(f) *Reports*—(1) *Operations.* Not later than March 1, 1974, the information required in paragraphs (f)(1) (i), (ii), (iii), and (iv) of this section shall be reported in writing to the nearest OSHA Area Director. Any changes in such information shall be similarly reported in writing within 15 calendar days of such change.

(i) A brief description and in-plant location of the area(s) regulated and the address of each regulated area;

(ii) The name(s) and other identifying information as to the presence of N-Nitrosodimethylamine in each regulated area;

(iii) The number of employees in each regulated area, during normal operations including maintenance activities; and

(iv) The manner in which N-Nitrosodimethylamine is present in each regulated area; e.g. whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(2) *Incidents.* Incidents which result in the release of N-Nitrosodimethylamine into any area where employees may be potentially exposed shall be reported in accordance with this paragraph.

(i) A report of the occurrence of the incident and the facts obtainable at that time including a report on any medical treatment of affected employees shall be made within 24 hours to the nearest OSHA Area Director.

(ii) A written report shall be filed with the nearest OSHA Area Director within 15 calendar days thereafter and shall include:

(A) A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

(B) A description of the area involved, and the extent of known and possible employee exposure and area contamination; and

(C) A report of any medical treatment of affected employees, and any medical surveillance program implemented; and

(D) An analysis of the circumstances of the incident, and measures taken or to be taken, with specific completion dates, to avoid further similar releases.

(g) *Medical surveillance.* At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(1) *Examinations.* (i) Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.

(ii) Authorized employees shall be provided periodic physical examinations, not less often than annually, following the preassignment examination.

(iii) In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, those undergoing treatment with steroids or cytotoxic agents, pregnancy and cigarette smoking.

(2) *Records.* (i) Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be maintained for the duration of the employee's employment. Upon termination of an employee's employment, including retirement or

death, or in the event that the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i). These records shall also be provided upon request to the Director.

(iii) Any physician who conducts a medical examination required by this paragraph shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

(Approved by the Office of Management and Budget under control number 1218–0081)

§ 1915.1017 Vinyl chloride.

(a) *Scope and application.* (1) This section includes requirements for the control of employee exposure to vinyl chloride (chloroethene), Chemical Abstracts Service Registry No. 75014.

(2) This section applies to the manufacture, reaction, packaging, repackaging, storage, handling or use of vinyl chloride or polyvinyl chloride, but does not apply to the handling or use of fabricated products made of polyvinyl chloride.

(3) This section applies to the transportation of vinyl chloride or polyvinyl chloride except to the extent that the Department of Transportation may regulate the hazards covered by this section.

(b) *Definitions.* (1) *Action level* means a concentration of vinyl chloride of 0.5 ppm averaged over an 8-hour work day.

(2) *Assistant Secretary* means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or his designee.

(3) *Authorized person* means any person specifically authorized by the employer whose duties require him to enter a regulated area or any person entering such an area as a designated representative of employees for the purpose of exercising an opportunity to observe monitoring and measuring procedures.

(4) *Director* means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services or his designee.

(5) *Emergency* means any occurrence such as, but not limited to, equipment failure, or operation of a relief device which is likely to, or does, result in massive release of vinyl chloride.

(6) *Fabricated product* means a product made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride.

(7) *Hazardous operation* means any operation, procedure, or activity where a release of either vinyl chloride liquid or gas might be expected as a consequence of the operation or because of an accident in the operation, which would result in an employee exposure in excess of the permissible exposure limit.

(8) *OSHA Area Director* means the Director for the Occupational Safety and Health Administration Area Office having jurisdiction over the geographic area in which the employer's establishment is located.

(9) *Polyvinyl chloride* means polyvinyl chloride homopolymer or copolymer before such is converted to a fabricated product.

(10) *Vinyl chloride* means vinyl chloride monomer.

(c) *Permissible exposure limit.* (1) No employee may be exposed to vinyl chloride at concentrations greater than 1 ppm averaged over any 8-hour period, and

(2) No employee may be exposed to vinyl chloride at concentrations greater than 5 ppm averaged over any period not exceeding 15 minutes.

(3) No employee may be exposed to vinyl chloride by direct contact with liquid vinyl chloride.

(d) *Monitoring.* (1) A program of initial monitoring and measurement shall be undertaken in each establishment to determine if there is any employee exposed, without regard to the use of respirators, in excess of the action level.

(2) Where a determination conducted under paragraph (d)(1) of this section shows any employee exposures, without regard to the use of respirators, in excess of the action level, a program for determining exposures for each such employee shall be established. Such a program:

(i) Shall be repeated at least monthly where any employee is exposed, without regard to the use of respirators, in excess of the permissible exposure limit.

(ii) Shall be repeated not less than quarterly where any employee is exposed, without regard to the use of respirators, in excess of the action level.

(iii) May be discontinued for any employee only when at least two consecutive monitoring determinations, made not less than 5 working days apart, show exposures for that employee at or below the action level.

(3) Whenever there has been a production, process or control change which may result in an increase in the release of vinyl chloride, or the employer has any other reason to suspect that any employee may be exposed in excess of the action level, a determination of employee exposure under paragraph (d)(1) of this section shall be performed.

(4) The method of monitoring and measurement shall have an accuracy (with a confidence level of 95 percent) of not less than plus or minus 50 percent from 0.25 through 0.5 ppm, plus or minus 35 percent from over 0.5 ppm through 1.0 ppm, and plus or minus 25 percent over 1.0 ppm. (Methods meeting these accuracy requirements are available in the "NIOSH Manual of Analytical Methods").

(5) Employees or their designated representatives shall be afforded reasonable opportunity to observe the monitoring and measuring required by this paragraph.

(e) *Regulated area.* (1) A regulated area shall be established where:

(i) Vinyl chloride or polyvinyl chloride is manufactured, reacted, repackaged, stored, handled or used; and

(ii) Vinyl chloride concentrations are in excess of the permissible exposure limit.

(2) Access to regulated areas shall be limited to authorized persons.

(f) *Methods of compliance.* Employee exposures to vinyl chloride shall be controlled to at or below the permissible exposure limit provided in paragraph (c) of this section by engineering, work practice, and personal protective controls as follows:

(1) Feasible engineering and work practice controls shall immediately be used to reduce exposures to at or below the permissible exposure limit.

(2) Wherever feasible engineering and work practice controls which can be instituted immediately are not sufficient to reduce exposures to at or below the permissible exposure limit, they shall nonetheless be used to reduce exposures to the lowest practicable level, and shall be supplemented by respiratory protection in accordance with paragraph (g) of this section. A program shall be established and implemented to reduce exposures to at or below the permissible exposure limit, or to the greatest extent feasible, solely by means of engineering and work practice controls, as soon as feasible.

(3) Written plans for such a program shall be developed and furnished upon request for examination and copying to authorized representatives of the Assistant Secretary and the Director.

Such plans shall be updated at least every six months.

(g) *Respiratory protection.* Where respiratory protection is required under this section:

(1) The employer shall provide a respirator which meets the requirements of this paragraph and shall assure that the employee uses such respirator, except that until April 1, 1976, wearing of respirators shall be at the discretion of each employee for exposures not in excess of 25 ppm, measured over any 15-minute period. Until April 1, 1976, each employee who chooses not to wear an appropriate respirator shall be informed at least quarterly of the hazards of vinyl chloride and the purpose, proper use, and limitations of respiratory devices.

(2) Respirators shall be selected from among those jointly approved by the Mining Enforcement and Safety Administration, Department of the Interior, and the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11.

(3) A respiratory protection program meeting the requirements of § 1910.134 shall be established and maintained.

(4) Selection of respirators for vinyl chloride shall be as follows:

Atmospheric concentration of vinyl chloride	Required apparatus
(i) Unknown, or above 3,600 p/m	Open-circuit, self-contained breathing apparatus, pressure demand type, with full facepiece.
(ii) Not over 3,600 p/m	(A) Combination type C supplied air respirator, pressure demand type, with full or half facepiece, and auxiliary self-contained air supply; or
(iii) Not over 1,000 p/m	(B) Combination type, supplied air respirator continuous flow type, with full or half facepiece, and auxiliary self-contained air supply. Type C, supplied air respirator, continuous flow type, with full or half facepiece, helmet or hood.
(iv) Not over 100 p/m	(A) Combination type C supplied air respirator demand type, with full facepiece, and auxiliary self-contained air supply; or (B) Open-circuit self-contained breathing apparatus with full facepiece, in demand mode; or (C) Type C supplied air respirator, demand type, with full facepiece.
(v) Not over 25 p/m	(A) A powered air-purifying respirator with hood, helmet, full or half facepiece, and a canister which provides a service life of at least 4 hours for concenrations of vinyl chloride up to 25 p/m, or (B) Gas mask, front- or back-mounted canister which provides a service life of at least 4 hours for concentrations of vinyl chloride up to 25 p/m.
(vi) Not over 10 p/m	(A) Combination type C supplied-air respirator, demand type, with half facepiece, and auxiliary self-contained air supply; or (B) Type C supplied-air respirator, demand type, with half facepiece; or (C) Any chemical cartridge respirator with an organic vapor cartridge which provides a service life of at least 1 hour for concentrations of vinyl chloride up to 10 p/m.

(5)(i) Entry into unknown concentrations or concentrations greater than 36,000 ppm (lower explosive limit) may be made only for purposes of life rescue; and

(ii) Entry into concentrations of less than 36,000 ppm, but greater than 3,600 ppm may be made only for purposes of life rescue, firefighting, or securing equipment so as to prevent a greater hazard from release of vinyl chloride.

(6) Where air-purifying respirators are used:

(i) Air-purifying cannisters or cartridges shall be replaced prior to the expiration of their service life or the end of the shift in which they are first used, whichever occurs first, and

(ii) A continuous monitoring and alarm system shall be provided where concentrations of vinyl chloride could reasonably exceed the allowable concentrations for the devices in use. Such system shall be used to alert employees when vinyl chloride concentrations exceed the allowable concentrations for the devices in use.

(7) Apparatus prescribed for higher concentrations may be used for any lower concentration.

(h) *Hazardous operations.* (1) Employees engaged in hazardous operations, including entry of vessels to clean polyvinyl chloride residue from vessel walls, shall be provided and required to wear and use;

(i) Respiratory protection in accordance with paragraphs (c) and (g) of this section; and

(ii) Protective garments to prevent skin contact with liquid vinyl chloride or with polyvinyl chloride residue from vessel walls. The protective garments shall be selected for the operation and its possible exposure conditions.

(2) Protective garments shall be provided clean and dry for each use.

(i) *Emergency situations.* A written operational plan for emergency situations shall be developed for each facility storing, handling, or otherwise using vinyl chloride as a liquid or compressed gas. Appropriate portions of the plan shall be implemented in the event of an emergency. The plan shall specifically provide that:

(1) Employees engaged in hazardous operations or correcting situations of existing hazardous releases shall be equipped as required in paragraph (h) of this section;

(2) Other employees not so equipped shall evacuate the area and not return until conditions are controlled by the methods required in paragraph (f) of this section and the emergency is abated.

(j) *Training.* Each employee engaged in vinyl chloride or polyvinyl chloride operations shall be provided training in a program relating to the hazards of vinyl chloride and precautions for its safe use.

(1) The program shall include:

(i) The nature of the health hazard from chronic exposure to vinyl chloride including specifically the carcinogenic hazard;

(ii) The specific nature of operations which could result in exposure to vinyl chloride in excess of the permissible limit and necessary protective steps;

(iii) The purpose for, proper use, and limitations of respiratory protective devices;

(iv) The fire hazard and acute toxicity of vinyl chloride, and the necessary protective steps;

(v) The purpose for and a description of the monitoring program;

(vi) The purpose for, and a description of, the medical surveillance program;

(vii) Emergency procedures;

(viii) Specific information to aid the employee in recognition of conditions which may result in the release of vinyl chloride; and

(ix) A review of this standard at the employee's first training and indoctrination program, and annually thereafter.

(2) All materials relating to the program shall be provided upon request to the Assistant Secretary and the Director.

(k) *Medical surveillance.* A program of medical surveillance shall be instituted for each employee exposed, without regard to the use of respirators, to vinyl chloride in excess of the action level. The program shall provide each such employee with an opportunity for examinations and tests in accordance with this paragraph. All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee.

(1) At the time of initial assignment, or upon institution of medical surveillance;

(i) A general physical examination shall be performed, with specific attention to detecting enlargement of liver, spleen or kidneys, or dysfunction in these organs, and for abnormalities in skin, connective tissues and the pulmonary system (See Appendix A).

(ii) A medical history shall be taken, including the following topics:

(A) Alcohol intake;

(B) Past history of hepatitis;

(C) Work history and past exposure to potential hepatotoxic agents, including drugs and chemicals;

(D) Past history of blood transfusions; and

(E) Past history of hospitalizations.

(iii) A serum specimen shall be obtained and determinations made of:

(A) Total bilirubin;

(B) Alkaline phosphatase;

(C) Serum glutamic oxalacetic transaminase (SGOT);

(D) Serum glutamic pyruvic transaminase (SGPT); and

(E) Gamma glustamyl transpeptidase.

(2) Examinations provided in accordance with this paragraph shall be performed at least:

(i) Every 6 months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for 10 years or longer; and

(ii) Annually for all other employees.

(3) Each employee exposed to an emergency shall be afforded appropriate medical surveillance.

(4) A statement of each employee's suitability for continued exposure to vinyl chloride including use of protective equipment and respirators, shall be obtained from the examining physician promptly after any examination. A copy of the physician's statement shall be provided each employee.

(5) If any employee's health would be materially impaired by continued exposure, such employee shall be withdrawn from possible contact with vinyl chloride.

(6) Laboratory analyses for all biological specimens included in medical examinations shall be performed in laboratories licensed under 42 CFR part 74.

(7) If the examining physician determines that alternative medical examinations to those required by paragraph (k)(1) of this section will provide at least equal assurance of detecting medical conditions pertinent to the exposure to vinyl chloride, the employer may accept such alternative examinations as meeting the requirements of paragraph (k)(1) of this section, if the employer obtains a statement from the examining physician setting forth the alternative examinations and the rationale for substitution. This statement shall be available upon request for examination and copying to authorized representatives of the Assistant Secretary and the Director.

(l) *Signs and labels.* (1) Entrances to regulated areas shall be posted with legible signs bearing the legend:

CANCER-SUSPECT AGENT
AUTHORIZED PERSONNEL ONLY

(2) Areas containing hazardous operations or where an emergency currently exists shall be posted with legible signs bearing the legend:

CANCER-SUSPECT AGENT
PROTECTIVE EQUIPMENT REQUIRED
AUTHORIZED PERSONNEL ONLY

(3) Containers of polyvinyl chloride resin waste from reactors or other waste contaminated with vinyl chloride shall be legibly labeled:

CONTAMINATED WITH VINYL CHLORIDE
CANCER-SUSPECT AGENT

(4) Containers of polyvinyl chloride shall be legibly labeled:

POLYVINYL CHLORIDE (OR TRADE NAME)
CONTAINS VINYL CHLORIDE
VINYL CHLORIDE IS A CANCER-SUSPECT AGENT

(5) Containers of vinyl chloride shall be legibly labeled either:

(i)

VINYL CHLORIDE
EXTREMELY FLAMMABLE GAS UNDER PRESSURE
CANCER-SUSPECT AGENT

or (ii) In accordance with 49 CFR parts 170 through 189, with the additional legend:

CANCER-SUSPECT AGENT

applied near the label or placard.

(6) No statement shall appear on or near any required sign, label or instruction which contradicts or detracts from the effect of, any required warning, information or instruction.

(m) *Records.* (1) All records maintained in accordance with this section shall include the name and social security number of each employee where relevant.

(2) Records of required monitoring and measuring and medical records shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a) through (e) and (g) through (i). These records shall be provided upon request to the Director. Authorized personnel rosters shall also be provided upon request to the Assistant Secretary and the Director.

(i) Monitoring and measuring records shall:

(A) State the date of such monitoring and measuring and the concentrations determined and identify the instruments and methods used;

(B) Include any additional information necessary to determine individual employee exposures where such exposures are determined by means other than individual monitoring of employees; and

(C) Be maintained for not less than 30 years.

(ii) [Reserved]

(iii) Medical records shall be maintained for the duration of the employment of each employee plus 20 years, or 30 years, whichever is longer.

(3) In the event that the employer ceases to do business and there is no successor to receive and retain his records for the prescribed period, these records shall be transmitted by registered mail to the Director, and each employee individually notified in writing of this transfer. The employer shall also comply with any additional requirements set forth in 29 CFR 1915.1120(h).

(n) *Reports.* (1) Not later than 1 month after the establishment of a regulated area, the following information shall be reported to the OSHA Area Director. Any changes to such information shall be reported within 15 days.

(i) The address and location of each establishment which has one or more regulated areas; and

(ii) The number of employees in each regulated area during normal operations, including maintenance.

(2) Emergencies, and the facts obtainable at that time, shall be reported within 24 hours to the OSHA Area Director. Upon request of the Area Director, the employer shall submit additional information in writing relevant to the nature and extent of employee exposures and measures taken to prevent future emergencies of similar nature.

(3) Within 10 working days following any monitoring and measuring which discloses that any employee has been exposed, without regard to the use of respirators, in excess of the permissible exposure limit, each such employee shall be notified in writing of the results of the exposure measurement and the steps being taken to reduce the exposure to within the permissible exposure limit.

(o) *Effective dates.* (1) Until April 1, 1975, the provisions currently set forth in § 1910.93q of this part shall apply.

(2) Effective April 1, 1975, the provisions set forth in § 1910.93q of this part shall apply.

(Approved by the Office of Management and Budget under control number 1218—0010)

Appendix A to § 1915.1017—Supplementary Medical Information

When required tests under paragraph (k)(1) of this section show abnormalities, the tests should be repeated as soon as practicable, preferably within 3 to 4 weeks. If tests remain abnormal, consideration should be given to withdrawal of the employee from contact with vinyl chloride, while a more comprehensive examination is made.

Additional tests which may be useful:

A. For kidney dysfunction: urine examination for albumin, red blood cells, and exfoliative abnormal cells.

B. Pulmonary system: Forced vital capacity, Forced expiratory volume at 1 second, and chest roentgenogram (posterior-anterior, 14 × 17 inches (35.56 × 43.18 cm)).

C. Additional serum tests: Lactic acid dehydrogenase, lactic acid dehydrogenase isoenzyme, protein determination, and protein electrophoresis.

D. For a more comprehensive examination on repeated abnormal serum tests: Hepatitis B antigen, and liver scanning.

§ 1915.1018 Inorganic arsenic.

(a) *Scope and application.* This section applies to all occupational exposures to inorganic arsenic except that this section does not apply to employee exposures in agriculture or resulting from pesticide application, the treatment of wood with preservatives or the utilization of arsenically preserved wood.

(b) *Definitions. Action level* means a concentration of inorganic arsenic of 5 micrograms per cubic meter of air (5 μg/m³) averaged over any eight (8) hour period.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring and measuring procedures under paragraph (e) of this section.

Director means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services or designee.

Inorganic arsenic means copper aceto-arsenite and all inorganic compounds containing arsenic except arsine, measured as arsenic (As).

(c) *Permissible exposure limit.* The employer shall assure that no employee is exposed to inorganic arsenic at concentrations greater than 10 micrograms per cubic meter of air (10 μg/m³), averaged over any 8-hour period.

(d) *Notification of use.* (1) By October 1, 1978 or within 60 days after the introduction of inorganic arsenic into the workplace, every employer who is required to establish a regulated area in his workplaces shall report in writing to the OSHA area office for each such workplace:

(i) The address of each such workplace;

(ii) The approximate number of employees who will be working in regulated areas; and

(iii) A brief summary of the operations creating the exposure and the actions which the employer intends to take to reduce exposures.

(2) Whenever there has been a significant change in the information required by paragraph (d)(1) of this section the employer shall report the changes in writing within 60 days to the OSHA area office.

(e) *Exposure monitoring*—(1) *General.* (i) Determinations of airborne exposure levels shall be made from air samples that are representative of each employee's exposure to inorganic arsenic over an eight (8) hour period.

(ii) For the purposes of this section, employee exposure is that exposure which would occur if the employee were not using a respirator.

(iii) The employer shall collect full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.

(2) *Initial monitoring.* Each employer who has a workplace or work operation covered by this standard shall monitor each such workplace and work operation to accurately determine the airborne concentration of inorganic arsenic to which employees may be exposed.

(3) *Frequency.* (i) If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated except as otherwise provided in paragraph (e)(4) of this section.

(ii) If the initial monitoring, required by this section, or subsequent monitoring reveals employee exposure to be above the permissible exposure limit, the employer shall repeat monitoring at least quarterly.

(iii) If the initial monitoring, required by this section, or subsequent monitoring reveals employee exposure to be above the action level and below the permissible exposure limit the employer shall repeat monitoring at least every six months.

(iv) The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least seven (7) days apart, are below the action level at which time the employer may discontinue monitoring for that employee until such time as any of the events in paragraph (e)(4) of this section occur.

(4) *Additional monitoring.* Whenever there has been a production, process, control or personal change which may result in new or additional exposure to inorganic arsenic, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to inorganic arsenic, additional monitoring which complies with paragraph (e) of this section shall be conducted.

(5) *Employee notification.* (i) Within five (5) working days after the receipt of monitoring results, the employer shall notify each employee in writing of the results which represent that employee's exposures.

(ii) Whenever the results indicate that the representative employee exposure exceeds the permissible exposure limit, the employer shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken to reduce exposure to or below the permissible exposure limit.

(6) *Accuracy of measurement.* (i) The employer shall use a method of monitoring and measurement which has an accuracy (with a confidence level of 95 percent) of not less than plus or minus 25 percent for concentrations of

inorganic arsenic greater than or equal to 10 μg/m³.

(ii) The employer shall use a method of monitoring and measurement which has an accuracy (with confidence level of 95 percent) of not less than plus or minus 35 percent for concentrations of inorganic arsenic greater than 5 μg/m³ but less than 10 μg/m³.

(f) *Regulated area*—(1) *Establishment.* The employer shall establish regulated areas where worker exposures to inorganic arsenic, without regard to the use of respirators, are in excess of the permissible limit.

(2) *Demarcation.* Regulated areas shall be demarcated and segregated from the rest of the workplace in any manner that minimizes the number of persons who will be exposed to inorganic arsenic.

(3) *Access.* Access to regulated areas shall be limited to authorized persons or to persons otherwise authorized by the Act or regulations issued pursuant thereto to enter such areas.

(4) *Provision of respirators.* All persons entering a regulated area shall be supplied with a respirator, selected in accordance with paragraph (h)(2) of this section.

(5) *Prohibited activities.* The employer shall assure that in regulated areas, food or beverages are not consumed, smoking products, chewing tobacco and gum are not used and cosmetics are not applied, except that these activities may be conducted in the lunchrooms, change rooms and showers required under paragraph (m) of this section. Drinking water may be consumed in the regulated area.

(g) *Methods of compliance*—(1) *Controls.* (i) The employer shall institute at the earliest possible time but not later than December 31, 1979, engineering and work practice controls to reduce exposures to or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

(ii) Where engineering and work practice controls are not sufficient to reduce exposures to or below the permissible exposure limit, they shall nonetheless be used to reduce exposures to the lowest levels achievable by these controls and shall be supplemented by the use of respirators in accordance with paragraph (h) of this section and other necessary personal protective equipment. Employee rotation is not required as a control strategy before respiratory protection is instituted.

(2) *Compliance Program.* (i) The employer shall establish and implement a written program to reduce exposures to or below the permissible exposure limit by means of engineering and work practice controls.

(ii) Written plans for these compliance programs shall include at least the following:

(A) A description of each operation in which inorganic arsenic is emitted; e.g. machinery used, material processed, controls in place, crew size, operating procedures and maintenance practices;

(B) Engineering plans and studies used to determine methods selected for controlling exposure to inorganic arsenic;

(C) A report of the technology considered in meeting the permissible exposure limit;

(D) Monitoring data;

(E) A detailed schedule for implementation of the engineering controls and work practices that cannot be implemented immediately and for the adaption and implementation of any additional engineering and work practices necessary to meet the permissible exposure limit;

(F) Whenever the employer will not achieve the permissible exposure limit with engineering controls and work practices by December 31, 1979, the employer shall include in the compliance plan an analysis of the effectiveness of the various controls, shall install engineering controls and institute work practices on the quickest schedule feasible, and shall include in the compliance plan and implement a program to minimize the discomfort and maximize the effectiveness of respirator use; and

(G) Other relevant information.

(iii) Written plans for such a program shall be submitted upon request to the Assistant Secretary and the Director, and shall be available at the worksite for examination and copying by the Assistant Secretary, Director, any affected employee or authorized employee representatives.

(iv) The plans required by this paragraph shall be revised and updated at least every 6 months to reflect the current status of the program.

(h) *Respiratory protection*—(1) *General.* The employer shall assure that respirators are used where required under this section to reduce employee exposures to below the permissible exposure limit and in emergencies. Respirators shall be used in the following circumstances:

(i) During the time period necessary to install or implement feasible engineering or work practice controls;

(ii) In work operations such as maintenance and repair activities in which the employer establishes that engineering and work practice controls are not feasible;

(iii) In work situations in which engineering controls and supplemental work practice controls are not yet sufficient to reduce exposures to or below the permissible exposure limit; or

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required under this section the employer shall select, provide at no cost to the employee and assure the use of the appropriate respirator or combination of respirators from Table I below for inorganic arsenic compounds without significant vapor pressure, or Table II below for inorganic arsenic compounds which have significant vapor pressure.

(ii) Where employee exposures exceed the permissible exposure limit for inorganic arsenic and also exceed the relevant limit for particular gasses such as sulfur dioxide, any air purifying respirator supplied to the employee as permitted by this standard must have a combination high efficiency filter with an appropriate gas sorbent. (See footnote in Table 1)

TABLE I—RESPIRATORY PROTECTION FOR INORGANIC ARSENIC PARTICULATE EXCEPT FOR THOSE WITH SIGNIFICANT VAPOR PRESSURE

Concentration of inorganic arsenic (as As) or condition of use	Required respirator
(i) Unknown or greater or lesser than 20,000 μg/m³ (20 mg/m³) or firefighting.	(A) Any full facepiece self-contained breathing apparatus operated in positive pressure mode.
(ii) Not greater than 20,000 μg/m³ (20 mg/m³)	(A) Supplied air respirator with full facepiece, hood, or helmet or suit and operated in positive pressure mode.
(iii) Not greater than 10,000 μg/m³ (10 mg/m³)	(A) Powered air-purifying respirators in all inlet face coverings with high efficiency filters.[1] (B) Half-mask supplied air respirators operated in positive pressure mode.

TABLE I—RESPIRATORY PROTECTION FOR INORGANIC ARSENIC PARTICULATE EXCEPT FOR THOSE WITH SIGNIFICANT VAPOR PRESSURE—Continued

Concentration of inorganic arsenic (as As) or condition of use	Required respirator
(iv) Not greater than 500 μg/m³	(A) Full facepiece air-purifying respirator equipped with high-efficiency filter.[1] (B) Any full facepiece supplied air respirator. (C) Any full facepiece self-contained breathing apparatus.
(v) Not greater than 100 μg/m³	(A) Half-mask air-purifying respirator equipped with high-efficiency filter.[1] (B) Any half-mask supplied air respirator.

[1]High-efficiency filter—99.97 pct efficiency against 0.3 micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.

TABLE II—RESPIRATORY PROTECTION FOR INORGANIC ARSENICALS (SUCH AS ARSENIC TRICHLORIDE[2] AND ARSENIC PHOSPHIDE) WITH SIGNIFICANT VAPOR PRESSURE

Concentration of inorganic arsenic (as As) or condition of use	Required respirator
(i) Unknown or greater or lesser than 20,000 μg/m³ (20mg/m³) or firefighting.	(A) Any full facepiece self-contained breathing apparatus operated in positive pressure mode.
(ii) Not greater than 20,000 μg/m³ (20 mg/m³)	(A) Supplied air respirator with full facepiece hood, or helmet or suit and operated in positive pressure mode.
(iii) Not greater than 10,000 μg/m³ (10mg/m³)	(A) Half-mask[2] supplied air respirator operated in positive pressure mode.
(iv) Not greater than 500 μg/m³	(A) Front or back mounted gas mask equipped with high-efficiency filter[1] and acid gas canister. (B) Any full facepiece supplied air respirator. (C) Any full facepiece self-contained breathing apparatus.
(v) Not greater than 100 μg/m³	(A) Half-mask[2] air-purifying respirator equipped with high-efficiency filter[1] and acid gas cartridge. (B) Any half-mask supplied air respirator.

[1]High efficiency filter—99.97 pct efficiency against 0.3 micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.
[2]Half-mask respirators shall not be used for protection against arsenic trichloride, as it is rapidly absorbed through the skin.

(iii) The employer shall select respirators from among those approved for protection against dust, fume, and mist by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR part 11.

(3) *Respirator usage.* (i) The employer shall assure that the respirator issued to the employee exhibits minimum facepiece leakage and that the respirator is fitted properly.

(ii) The employer shall perform qualitative fit tests at the time of initial fitting and at least semi-annually thereafter for each employee wearing respirators, where quantitative fit tests are not required.

(iii) Employers with more than 20 employees wearing respirators shall perform a quantitative face fit test at the time of initial fitting and least semi-annually thereafter for each employee wearing negative pressure respirators. The test shall be used to select facepieces that provide the required protection as prescribed in Table I or II.

(iv) If an employee has demonstrated difficulty in breathing during the fitting test or during use, he or she shall be examined by a physician trained in pulmonary medicine to determine whether the employee can wear a respirator while performing the required duty.

(4) *Respirator program.* (i) The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e) and (f).

(ii) The employer shall permit each employee who uses a filter respirator to change the filter elements whenever an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.

(iii) Employees who wear respirators shall be permitted to leave work areas to wash their face and respirator facepiece to prevent skin irritation associated with respirator use.

(5) *Commencement of respirator use.* (i) The employer's obligation to provide respirators commences on August 1, 1978 for employees exposed over 500 μg/m³ of inorganic arsenic, as soon as possible but not later than October 1, 1978 for employees exposed to over 50 μg/m³ of inorganic arsenic, and as soon as possible but not later than December 1, 1978 for employees exposed between 10 and 50 μg/m³ of inorganic arsenic.

(ii) Employees with exposures below 50 μg/m³ of inorganic arsenic may choose not to wear respirators until December 31, 1979.

(iii) After December 1, 1978 any employee required to wear air-purifying respirators may choose, and if so chosen the employer must provide, if it will give proper protection, a powered air purifying respirator and in addition if necessary a combination dust and acid gas respirator for times where exposures to gases are over the relevant exposure limits.

(i) [Reserved]

(j) *Protective work clothing and equipment*—(1) *Provision and use.* Where the possibility of skin or eye irritation from inorganic arsenic exists, and for all workers working in regulated areas, the employer shall provide at no cost to the employee and assure that employees use appropriate and clean protective work clothing and equipment such as, but not limited to:

(i) Coveralls or similar full-body work clothing;

(ii) Gloves, and shoes or coverlets;

(iii) Face shields or vented goggles when necessary to prevent eye irritation, which comply with the requirements of § 1915.133(a) (2)–(6); and

(iv) Impervious clothing for employees subject to exposure to arsenic trichloride.

(2) *Cleaning and replacement.* (i) The employer shall provide the protective clothing required in paragraph (j)(1) of this section in a freshly laundered and dry condition at least weekly, and daily if the employee works in areas where exposures are over 100 μg/m³ of inorganic arsenic or in areas where more frequent washing is needed to prevent skin irritation.

(ii) The employer shall clean, launder, or dispose of protective clothing

required by paragraph (j)(1) of this section.

(iii) The employer shall repair or replace the protective clothing and equipment as needed to maintain their effectiveness.

(iv) The employer shall assure that all protective clothing is removed at the completion of a work shift only in change rooms prescribed in paragraph (m)(1) of this section.

(v) The employer shall assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room which prevents dispersion of inorganic arsenic outside the container.

(vi) The employer shall inform in writing any person who cleans or launders clothing required by this section, of the potentially harmful effects including the carcinogenic effects of exposure to inorganic arsenic.

(vii) The employer shall assure that the containers of contaminated protective clothing and equipment in the workplace or which are to be removed from the workplace are labelled as follows:

Caution: Clothing contaminated with inorganic arsenic; do not remove dust by blowing or shaking. Dispose of inorganic arsenic contaminated wash water in accordance with applicable local, State or Federal regulations.

(viii) The employer shall prohibit the removal of inorganic arsenic from protective clothing or equipment by blowing or shaking.

(k) *Housekeeping*—(1) *Surfaces.* All surfaces shall be maintained as free as practicable of accumulations of inorganic arsenic.

(2) *Cleaning floors.* Floors and other accessible surfaces contaminated with inorganic arsenic may not be cleaned by the use of compressed air, and shoveling and brushing may be used only where vacuuming or other relevant methods have been tried and found not to be effective.

(3) *Vacuuming.* Where vacuuming methods are selected, the vacuums shall be used and emptied in a manner to minimize the reentry of inorganic arsenic into the workplace.

(4) *Housekeeping plan.* A written housekeeping and maintenance plan shall be kept which shall list appropriate frequencies for carrying out housekeeping operations, and for cleaning and maintaining dust collection equipment. The plan shall be available for inspection by the Assistant Secretary.

(5) *Maintenance of equipment.* Periodic cleaning of dust collection and ventilation equipment and checks of their effectiveness shall be carried out to maintain the effectiveness of the system and a notation kept of the last check of effectiveness and cleaning or maintenance.

(l) [Reserved]

(m) *Hygiene facilities and practices*—(1) *Change rooms.* The employer shall provide for employees working in regulated areas or subject to the possibility of skin or eye irritation from inorganic arsenic, clean change rooms equipped with storage facilities for street clothes and separate storage facilities for protective clothing and equipment in accordance with 29 CFR 1910.141(e).

(2) *Showers.* (i) The employer shall assure that employees working in regulated areas or subject to the possibility of skin or eye irritation from inorganic arsenic shower at the end of the work shift.

(ii) The employer shall provide shower facilities in accordance with § 1910.141(d)(3).

(3) *Lunchrooms.* (i) The employer shall provide for employees working in regulated areas, lunchroom facilities which have a temperature controlled, positive pressure, filtered air supply, and which are readily accessible to employees working in regulated areas.

(ii) The employer shall assure that employees working in the regulated area or subject to the possibility of skin or eye irritation from exposure to inorganic arsenic wash their hands and face prior to eating.

(4) *Lavatories.* The employer shall provide lavatory facilities which comply with § 1910.141(d) (1) and (2) (ii) through (vii).

(5) *Vacuuming clothes.* The employer shall provide facilities for employees working in areas where exposure, without regard to the use of respirators, exceeds 100 $\mu g/m^3$ to vacuum their protective clothing and clean or change shoes worn in such areas before entering change rooms, lunchrooms or shower rooms required by paragraph (j) of this section and shall assure that such employees use such facilities.

(6) *Avoidance of skin irritation.* The employer shall assure that no employee is exposed to skin or eye contact with arsenic trichloride, or to skin or eye contact with liquid or particulate inorganic arsenic which is likely to cause skin or eye irritation.

(n) *Medical surveillance*—(1) *General*—(i) *Employees covered.* The employer shall institute a medical surveillance program for the following employees:

(A) All employees who are or will be exposed above the action level, without regard to the use of respirators, at least 30 days per year; and

(B) All employees who have been exposed above the action level, without regard to respirator use, for 30 days or more per year for a total of 10 years or more of combined employment with the employer or predecessor employers prior to or after the effective date of this standard. The determination of exposures prior to the effective date of this standard shall be based upon prior exposure records, comparison with the first measurements taken after the effective date of this standard, or comparison with records of exposures in areas with similar processes, extent of engineering controls utilized and materials used by that employer.

(ii) *Examination by physician.* The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee, without loss of pay and at a reasonable time and place.

(2) *Initial examinations.* By December 1, 1978, for employees initially covered by the medical provisions of this section, or thereafter at the time of initial assignment to an area where the employee is likely to be exposed over the action level at least 30 days per year, the employer shall provide each affected employee an opportunity for a medical examination, including at least the following elements:

(i) A work history and a medical history which shall include a smoking history and the presence and degree of respiratory symptoms such as breathlessness, cough, sputum production and wheezing.

(ii) A medical examination which shall include at least the following:

(A) A 14" by 17" (35.56 × 43.18 cm) posterior-anterior chest X-ray and International Labor Office UICC/Cincinnati (ILO U/C) rating;

(B) A nasal and skin examination;

(C) A sputum cytology examination; and

(D) Other examinations which the physician believes appropriate because of the employees exposure to inorganic arsenic or because of required respirator use.

(3) *Periodic examinations.* (i) The employer shall provide the examinations specified in paragraphs (n)(2)(i) and (n)(2)(ii) (A), (B), and (D) at least annually for covered employees who are under 45 years of age with fewer than 10 years of exposure over the action level without regard to respirator use.

(ii) The employer shall provide the examinations specified in paragraphs

(n)(2)(i) and (n)(2)(ii) of this section at least semi-annually for other covered employees.

(iii) Whenever a covered employee has not taken the examinations specified in paragraphs (n)(2)(i) and (n)(2)(ii) of this section within six (6) months preceding the termination of employment, the employer shall provide such examinations to the employee upon termination of employment.

(4) *Additional examinations.* If the employee for any reason develops signs or symptoms commonly associated with exposure to inorganic arsenic the employer shall provide an appropriate examination and emergency medical treatment.

(5) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this standard and its appendices;

(ii) A description of the affected employee's duties as they relate to the employee's exposure;

(iii) The employee's representative exposure level or anticipated exposure level;

(iv) A description of any personal protective equipment used or to be used; and

(v) Information from previous medical examinations of the affected employee which is not readily available to the examining physician.

(6) *Physician's written opinion.* (i) The employer shall obtain a written opinion from the examining physician which shall include:

(A) The results of the medical examination and tests performed;

(B) The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from exposure to inorganic arsenic;

(C) Any recommended limitations upon the employee's exposure to inorganic arsenic or upon the use of protective clothing or equipment such as respirators; and

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further explanation or treatment.

(ii) The employer shall instruct the physician not to reveal in the written opinion specific findings or diagnoses unrelated to occupational exposure.

(iii) The employer shall provide a copy of the written opinion to the affected employee.

(o) *Employee information and training*—(1) *Training program.* (i) The employer shall institute a training program for all employees who are subject to exposure to inorganic arsenic above the action level without regard to respirator use, or for whom there is the possibility of skin or eye irritation from inorganic arsenic. The employer shall assure that those employees participate in the training program.

(ii) The training program shall be provided by October 1, 1978, for employees covered by this provision, at the time of initial assignment for those subsequently covered by this provision, and shall be repeated at least quarterly for employees who have optional use of respirators and at least annually for other covered employees thereafter; and the employer shall assure that each employee is informed of the following:

(A) The information contained in Appendix A;

(B) The quantity, location, manner of use, storage, sources of exposure, and the specific nature of operations which could result in exposure to inorganic arsenic as well as any necessary protective steps;

(C) The purpose, proper use, and limitation of respirators;

(D) The purpose and a description of the medical surveillance program as required by paragraph (n) of this section;

(E) The engineering controls and work practices associated with the employee's job assignment; and

(F) A review of this standard.

(2) *Access to training materials.* (i) The employer shall make readily available to all affected employees a copy of this standard and its appendices.

(ii) The employer shall provide; upon request, all materials relating to the employee information and training program to the Assistant Secretary and the Director.

(p) *Signs and labels*—(1) *General.* (i) The employer may use labels or signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs and labels required by this paragraph.

(ii) The employer shall assure that no statement appears on or near any sign or label required by this paragraph which contradicts or detracts from the meaning of the required sign or label.

(2) *Signs.* (i) The employer shall post signs demarcating regulated areas bearing the legend:

DANGER
INORGANIC ARSENIC
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
NO SMOKING OR EATING
RESPIRATOR REQUIRED

(ii) The employer shall assure that signs required by this paragraph are illuminated and cleaned as necessary so that the legend is readily visible.

(3) *Labels.* The employer shall apply precautionary labels to all shipping and storage containers of inorganic arsenic, and to all products containing inorganic arsenic except when the inorganic arsenic in the product is bound in such a manner so as to make unlikely the possibility of airborne exposure to inorganic arsenic. (Possible examples of products not requiring labels are semiconductors, light emitting diodes and glass). The label shall bear the following legend:

DANGER
CONTAINS INORGANIC ARSENIC
CANCER HAZARD
HARMFUL IF INHALED OR SWALLOWED
USE ONLY WITH ADEQUATE VENITLATION
OR RESPIRATORY PROTECTION

(q) *Recordkeeping*—(1) *Exposure monitoring.* (i) The employer shall establish and maintain an accurate record of all monitoring required by paragraph (e) of this section.

(ii) This record shall include:

(A) The date(s), number, duration location, and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;

(B) A description of the sampling and analytical methods used and evidence of their accuracy;

(C) The type of respiratory protective devices worn, if any;

(D) Name, social security number, and job classification of the employees monitored and of all other employees whose exposure the measurement is intended to represent; and

(E) The environmental variables that could affect the measurement of the employee's exposure.

(iii) The employer shall maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever, is longer.

(2) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by paragraph (n) of this section.

(ii) This record shall include:

(A) The name, social security number, and description of duties of the employee;

(B) A copy of the physician's written opinions;

(C) Results of any exposure monitoring done for that employee and the representative exposure levels supplied to the physician; and

(D) Any employee medical complaints related to exposure to inorganic arsenic.

(iii) The employer shall in addition keep, or assure that the examining physician keeps, the following medical records;

(A) A copy of the medical examination results including medical and work history required under paragraph (n) of this section;

(B) A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;

(C) The initial X-ray;

(D) The X-rays for the most recent 5 years;

(E) Any X-rays with a demonstrated abnormality and all subsequent X-rays;

(F) The initial cytologic examination slide and written description;

(G) The cytologic examination slide and written description for the most recent 5 years; and

(H) Any cytologic examination slides with demonstrated atypia, if such atypia persists for 3 years, and all subsequent slides and written descriptions.

(iv) The employer shall maintain or assure that the physician maintains those medical records for at least 40 years, or for the duration of employment plus 20 years whichever is longer.

(3) *Availability.* (i) The employer shall make available upon request all records required to be maintained by paragraph (q) of this section to the Assistant Secretary and the Director for examination and copying.

(ii) Records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a) through (e) and (g) through (i).

(4) *Transfer of records.* (i) Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by this section.

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records required to be maintained by this section for the prescribed period, these records shall be transmitted to the Director.

(iii) At the expiration of the retention period for the records required to be maintained by this section, the employer shall notify the Director at least 3 months prior to the disposal of such records and shall transmit those records to the Director if he requests them within that period.

(iv) The employer shall also comply with any additional requirements involving the transfer of records set in 29 CFR 1915.1120(h).

(r) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to inorganic arsenic conducted pursuant to paragraph (e) of this section.

(2) *Observation procedures.* (i) Whenever observation of the monitoring of employee exposure to inorganic arsenic requires entry into an area where the use of respirators, protective clothing, or equipment is required, the employer shall provide the observer with and assure the use of such respirators, clothing, and such equipment, and shall require the observer to comply with all other applicable safety and health procedures.

(ii) Without interfering with the monitoring, observers shall be entitled to;

(A) Receive an explanation of the measurement procedures;

(B) Observe all steps related to the monitoring of inorganic arsenic performed at the place of exposure; and

(C) Record the results obtained or receive copies of the results when returned by the laboratory.

(s) *Effective date.* This standard shall become effective August 1, 1978.

(t) *Appendices.* The information contained in the appendices to this section is not intended by itself, to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation.

(u) *Startup dates*—(1) *General.* The startup dates of requirements of this standard shall be the effective date of this standard unless another startup date is provided for either in other paragraphs of this section or in this paragraph.

(2) *Monitoring.* Initial monitoring shall be commenced on August 1, 1978, and shall be completed by September 15, 1978.

(3) *Regulated areas.* Regulated areas required to be established as a result of initial monitoring shall be set up as soon as possible after the results of that monitoring is known and no later than October 1, 1978.

(4) *Compliance program.* The written program required by paragraph (g)(2) as a result of initial monitoring shall be made available for inspection and copying as soon as possible and no later than December 1, 1978.

(5) *Hygiene and lunchroom facilities.* Construction plans for change- rooms, showers, lavatories, and lunchroom facilities shall be completed no later than December 1, 1978, and these facilities shall be constructed and in use no later than July 1, 1979. However, if as part of the compliance plan it is predicted by an independent engineering firm that engineering controls and work practices will reduce exposures below the permissible exposure limit by December 31, 1979, for affected employees, then such facilities need not be completed until 1 year after the engineering controls are completed or December 31, 1980, whichever is earlier, if such controls have not in fact succeeded in reducing exposure to below the permissible exposure limit.

(6) *Summary of startup dates set forth elsewhere in this standard.*

Startup Dates

August 1, 1978—Respirator use over 500 μg/m³.

as soon as possible but no later than

September 15, 1978—Completion of initial monitoring.

October 1, 1978—Complete establishment of regulated areas. Respirator use for employees exposed above 50 μg/m³. Completion of initial training. Notification of use.

December 1, 1978—Respirator use over 10 μg/m³. Completion of initial medical. Completion of compliance plan. Optional use of powered air-purifying respirators.

July 1, 1979—Completion of lunch rooms and hygiene facilities.

December 31, 1979—Completion of engineering controls.

All other requirements of the standard have as their startup date August 1, 1978.

(Approved by the Office of Management and Budget under control number 1218—0104)

Appendix A to § 1915.1018—Inorganic Arsenic Substance Information Sheet

I. SUBSTANCE IDENTIFICATION

A. *Substance.* Inorganic Arsenic.

B. *Definition.* Copper acetoarsenite, arsenic and all inorganic compounds containing arsenic except arsine, measured as arsenic (As).

C. *Permissible Exposure Limit.* 10 micrograms per cubic meter of air as determined as an average over an 8-hour period. No employee may be exposed to any skin or eye contact with arsenic trichloride or to skin or eye contact likely to cause skin or eye irritation.

D. *Regulated Areas.* Only employees authorized by your employer should enter a regulated area.

II. HEALTH HAZARD DATA

A. *Comments.* The health hazard of inorganic arsenic is high.

B. *Ways in which the chemical affects your body.* Exposure to airborne concentrations of inorganic arsenic may cause lung cancer, and can be a skin irritant. Inorganic arsenic may also affect your body if swallowed. One compound in particular, arsenic trichloride, is especially dangerous because it can be absorbed readily through the skin. Because inorganic arsenic is a poison, you should wash your hands thoroughly prior to eating or smoking.

III. PROTECTIVE CLOTHING AND EQUIPMENT

A. *Respirators.* Respirators will be provided by your employer at no cost to you for routine use if your employer is in the process of implementing engineering and work practice controls or where engineering and work practice controls are not feasible or insufficient. You must wear respirators for non-routine activities or in emergency situations where you are likely to be exposed to levels of inorganic arsenic in excess of the permissible exposure limit. Since how well your respirator fits your face is very important, your employer is required to conduct fit tests to make sure the respirator seals properly when you wear it. These tests are simple and rapid and will be explained to you during training sessions.

B. *Protective clothing.* If you work in a regulated area, your employer is required to provide at no cost to you, and you must wear, appropriate, clean, protective clothing and equipment. The purpose of this equipment is to prevent you from bringing to your home arsenic-contaminated dust and to protect your body from repeated skin contact with inorganic arsenic likely to cause skin irritation. This clothing should include such items as coveralls or similar full-body clothing, gloves, shoes or coverlets, and aprons. Protective equipment should include face shields or vented goggles, where eye irritation may occur.

IV. HYGIENE FACILITIES AND PRACTICES

You must not eat, drink, smoke, chew gum or tobacco, or apply cosmetics in the regulated area, except that drinking water is permitted. If you work in a regulated area your employer is required to provide lunchrooms and other areas for these purposes.

If you work in a regulated area, your employer is required to provide showers, washing facilities, and change rooms. You must wash your face, and hands before eating and must shower at the end of the work shift. Do not take used protective clothing out of change rooms without your employer's permission. Your employer is required to provide for laundering or cleaning of your protective clothing.

V. SIGNS AND LABELS

Your employer is required to post warning signs and labels for your protection. Signs must be posted in regulated areas. The signs must warn that a cancer hazard is present, that only authorized employees may enter the area, and that no smoking or eating is allowed, and that respirators must be worn.

VI. MEDICAL EXAMINATIONS

If your exposure to arsenic is over the Action Level (5 μg/m³)—(including all persons working in regulated areas) at least 30 days per year, or you have been exposed to arsenic for more than 10 years over the Action Level, your employer is required to provide you with a medical examination. The examination shall be every 6 months for employees over 45 years old or with more than 10 years exposure over the Action Level and annually for other covered employees. The medical examination must include a medical history; a chest x-ray; skin examination; nasal examination and sputum cytology exam for the early detection of lung cancer. The cytology exams are only included in the initial exam and examinations given after you are either 45 years or older or have 10 or more years employment over the Action Level. The examining physician will provide a written opinion to your employer containing the results of the medical exams. You should also receive a copy of this opinion. The physician must not tell your employer any conditions he detects unrelated to occupational exposure to arsenic but must tell you those conditions.

VII. OBSERVATION OF MONITORING

Your employer is required to monitor your exposure to arsenic and you or your representatives are entitled to observe the monitoring procedure. You are entitled to receive an explanation of the measurement procedure, and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you must also be provided with and must wear the protective clothing and equipment.

VIII. ACCESS TO RECORDS

You or your representative are entitled to records of your exposure to inorganic arsenic and your medical examination records if you request your employer to provide them.

IX. TRAINING AND NOTIFICATION

Additional information on all of these items plus training as to hazards of exposure to inorganic arsenic and the engineering and work practice controls associated with your job will also be provided by your employer. If you are exposed over the permissible exposure limit, your employer must inform you of that fact and the actions he is taking to reduce your exposures.

Appendix B to § 1915.1018—Substance Technical Guidelines

ARSENIC, ARSENIC TRIOXIDE, ARSENIC TRICHLORIDE (THREE EXAMPLES)

I. Physical and chemical properties

A. Arsenic (metal).

1. Formula: As.

2. Appearance: Gray metal.

3. Melting point: Sublimes without melting at 613°C.

4. Specific Gravity: (H_2O=1):5.73.

5. Solubility in water: Insoluble.

B. Arsenic Trioxide.

1. Formula: As203, (As_4O_6).

2. Appearance: White powder.

3. Melting point: 315°C.

4. Specific Gravity (H_2O=1):3.74.

5. Solubility in water: 3.7 grams in 100cc of water at 20°C.

C. Arsenic Trichloride (liquid).

1. Formula: AsC. 13.

2. Appearance: Colorless or pale yellow liquid.

3. Melting point: −8.5°C.

4. Boiling point: 130.2°C.

5. Specific Gravity (H_2O=1):2.16 at 20°C.

6. Vapor Pressure: 10mm Hg at 23.5°C.

7. Solubility in Water: Decomposes in water.

II. Fire, explosion and reactivity data.

A. Fire: Arsenic, arsenic Trioxide and Arsenic Trichloride are nonflammable.

B. Reactivity:

1. Conditions Contributing to Instability: Heat.

2. Incompatibility: Hydrogen gas can react with inorganic arsenic to form the highly toxic gas arsine.

III. Monitoring and Measurement Procedures

Samples collected should be full shift (at least 7-hour) samples. Sampling should be done using a personal sampling pump at a flow rate of 2 liters per minute. Samples should be collected on 0.8 micrometer pore size membrane filter (37mm diameter). Volatile arsenicals such as arsenic trichloride can be most easily collected in a midget bubbler filled with 15 ml. of 0.1 N NaOH.

The method of sampling and analysis should have an accuracy of not less than ±25 percent (with a confidence limit of 95 percent) for 10 micrograms per cubic meter of air (10 μg/m³) and ±35 percent (with a confidence limit of 95 percent) for concentrations of inorganic arsenic between 5 and 10 μg/m³.

Appendix C to § 1915.1018—Medical Surveillance Guidelines

I. GENERAL

Medical examinations are to be provided for all employees exposed to levels of inorganic arsenic above the action level (5 μg/m³) for at least 30 days per year (which would include among others, all employees, who work in regulated areas). Examinations are also to be provided to all employees who have had 10 years or more exposure above the action level for more than 30 days per year while working for the present or predecessor employer though they may no longer be exposed above the level.

An initial medical examination is to be provided to all such employees by December 1, 1978. In addition, an initial medical examination is to be provided to all employees who are first assigned to areas in which worker exposure will probably exceed 5 μg/m³ (after the effective date of this standard) at the time of initial assignment. In addition to its immediate diagnostic usefulness, the initial examination will provide a baseline for comparing future test results. The initial examination must include as a minimum the following elements:

(1) A work and medical history, including a smoking history, and presence and degree of respiratory symptoms such as breathlessness, cough, sputum production, and wheezing;

(2) A 14" by 17" (35.56 × 43.18 cm) posterior-anterior chest X-ray and an International Labor Office UICC/Cincinnati (ILO U/C) rating;

(3) A nasal and skin examination;

(4) A Sputum Cytology examination; and

(5) Other examinations which the physician believes appropriate because of the employee's exposure to inorganic arsenic or because of required respirator use.

Periodic examinations are also to be provided to the employees listed above. The periodic examinations shall be given annually for those covered employees 45 years of age or less with fewer than 10 years

employment in areas where employee exposure exceeds the action level (5 μg/m³). Periodic examinations need not include sputum cytology and only an updated medical history is required.

Periodic examinations for other covered employees, shall be provided every six (6) months. These examinations shall include all tests required in the initial examination, except that the medical history need only be updated.

The examination contents are minimum requirements. Additional tests such as lateral and oblique X-rays or pulmonary function tests may be useful. For workers exposed to three arsenicals which are associated with lymphatic cancer, copper acetoarsenite, potassium arsenite, or sodium arsenite the examination should also include palpation of superficial lymph nodes and complete blood count.

II. Noncarcinogenic Effects

The OSHA standard is based on minimizing risk of exposed workers dying of lung cancer from exposure to inorganic arsenic. It will also minimize skin cancer from such exposures.

The following three sections quoted from "Occupational Diseases: A Guide to Their Recognition", Revised Edition, June 1977, National Institute for Occupational Safety and Health is included to provide information on the nonneoplastic effects of exposure to inorganic arsenic. Such effects should not occur if the OSHA standards are followed.

A. *Local*—Trivalent arsenic compounds are corrosive to the skin. Brief contact has no effect but prolonged contact results in a local hyperemia and later vesicular or pustular eruption. The moist mucous membranes are most sensitive to the irritant action. Conjunctiva, moist and macerated areas of skin, the eyelids, the angles of the ears, nose, mouth, and respiratory mucosa are also vulnerable to the irritant effects. The wrists are common sites of dermatitis, as are the genitalia if personal hygiene is poor. Perforations of the nasal septum may occur. Arsenic trioxide and pentoxide are capable of producing skin sensitization and contact dermatitis. Arsenic is also capable of producing keratoses, especially of the palms and soles.

B. *Systemic*—The acute toxic effects of arsenic are generally seen following ingestion of inorganic arsenical compounds. This rarely occurs in an industrial setting. Symptoms develop within ½ to 4 hours following ingestion and are usually characterized by constriction of the throat followed by dysphagia, epigastric pain, vomiting, and watery diarrhea. Blood may appear in vomitus and stools. If the amount ingested is sufficiently high, shock may develop due to severe fluid loss, and death may ensue in 24 hours. If the acute effects are survived, exfoliative dermatitis and peripheral neuritis may develop.

Cases of acute arsenical poisoning due to inhalation are exceedingly rare in industry. When it does occur, respiratory tract symptoms—cough, chest pain, dyspnea—giddiness, headache, and extreme general weakness precede gastrointestinal symptoms. The acute toxic symptoms of trivalent arsenical poisoning are due to severe inflammation of the mucous membranes and greatly increased permeability of the blood capillaries.

Chronic arsenical poisoning due to ingestion is rare and generally confined to patients taking prescribed medications. However, it can be a concomitant of inhaled inorganic arsenic from swallowed sputum and improper eating habits. Symptoms are weight loss, nausea and diarrhea alternating with constipation, pigmentation and eruption of the skin, loss of hair, and peripheral neuritis. Chronic hepatitis and cirrhosis have been described. Polyneuritis may be the salient feature, but more frequently there are numbness and parasthenias of "glove and stocking" distribution. The skin lesions are usually melanotic and keratotic and may occasionally take the form of an intradermal cancer of the squamous cell type, but without infiltrative properties. Horizontal white lines (striations) on the fingernails and toenails are commonly seen in chronic arsenical poisoning and are considered to be a diagnostic accompaniment of arsenical polyneuritis.

Inhalation of inorganic arsenic compounds is the most common cause of chronic poisoning in the industrial situation. This condition is divided into three phases based on signs and symptoms.

First Phase: The worker complains of weakness, loss of appetite, some nausea, occasional vomiting, a sense of heaviness in the stomach, and some diarrhea.

Second Phase: The worker complains of conjunctivitis, a catarrhal state of the mucous membranes of the nose, larynx, and respiratory passage. Coryza, hoarseness, and mild tracheobronchitis may occur. Perforation of the nasal septum is common, and is probably the most typical lesion of the upper respiratory tract in occupational exposure to arsenical dust. Skin lesions, eczematoid and allergic in type, are common.

Third Phase: The worker complains of symptoms of peripheral neuritis, initially of hands and feet, which is essentially sensory. In more severe cases, motor paralyses occur; the first muscles affected are usually the toe extensors and the peronei. In only the most severe cases will paralysis of flexor muscles of the feet or of the extensor muscles of hands occur.

Liver damage from chronic arsenical poisoning is still debated, and as yet the question is unanswered. In cases of chronic and acute arsenical poisoning, toxic effects to the myocardium have been reported based on EKG changes. These findings, however, are now largely discounted and the EKG changes are ascribed to electrolyte disturbances concomitant with arsenicalism. Inhalation of arsenic trioxide and other inorganic arsenical dusts does not give rise to radiological evidence or pneumoconiosis. Arsenic does have a depressant effect upon the bone marrow, with disturbances of both erythropoiesis and myelopoiesis.

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III. Sputum Cytology

Sputum can be collected by aerosol inhalation during the medical exam or by spontaneous early morning cough at home. Sputum is induced by transoral inhalation of an aerosolized solution of eight per cent (8 percent) sodium chloride in water. After inhaling as few as three to five breaths the subject usually yields an adequate sputum. All sputum should be collected directly into sixty percent (60 percent) alcohol.

Scientific evidence suggests that chest X-rays and sputum cytology should be used together as screening tests for lung tests for lung cancer in high risk populations such as workers exposed to inorganic arsenic. The tests are to be performed every six months on workers who are 45 years of age or older or have worked in the regulated area for 10 or more years. Since the tests seem to be complementary, it may be advantageous to alternate the test procedures. For instance, chest X-rays could be obtained in June and December and sputum cytologies could be obtained in March and September. Facilities for providing necessary diagnostic investigation should be readily available as well as chest physicians, surgeons, radiologists, pathologists and immunotherapists to provide any necessary treatment services.

§ 1915.1025 Lead.

(a) *Scope and application.* (1) This section applies to all occupational exposure to lead, except as provided in paragraph (a)(2).

(2) This section does not apply to the construction industry or to agricultural operations covered by 29 CFR Part 1928.

(b) *Definitions. Action level* means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 μg/m³) averaged over an 8-hour period.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Director means the Director, National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, or designee.

Lead means metallic lead, all inorganic lead compounds, and organic

lead soaps. Excluded from this definition are all other organic lead compounds.

(c) *Permissible exposure limit (PEL).* (1) The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 $\mu g/m^3$) averaged over an 8-hour period.

(2) If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that day, shall be reduced according to the following formula:

Maximum permissible limit (in $\mu g/m^3$)=400÷hours worked in the day.

(3) When respirators are used to supplement engineering and work practice controls to comply with the PEL and all the requirements of paragraph (f) have been met, employee exposure, for the purpose of determining whether the employer has complied with the PEL, may be considered to be at the level provided by the protection factor of the respirator for those periods the respirator is worn. Those periods may be averaged with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

(d) *Exposure monitoring*—(1) *General.* (i) For the purposes of paragraph (d), employee exposure is that exposure which would occur if the employee were not using a respirator.

(ii) With the exception of monitoring under paragraph (d)(3), the employer shall collect full shift (for at least 7 continuous hours) personal samples including at least one sample for each shift for each job classification in each work area.

(iii) Full shift personal samples shall be representative of the monitored employee's regular, daily exposure to lead.

(2) *Initial determination.* Each employer who has a workplace or work operation covered by this standard shall determine if any exployee may be exposed to lead at or above the action level.

(3) *Basis of initial determination.* (i) The employer shall monitor employee exposures and shall base initial determinations on the employee exposure monitoring results and any of the following, relevant considerations:

(A) Any information, observations, or calculations which would indicate employee exposure to lead;

(B) Any previous measurements of airborne lead; and

(C) Any employee complaints of symptoms which may be attributable to exposure to lead.

(ii) Monitoring for the initial determination may be limited to a representative sample of the exposed employees who the employer reasonably believes are exposed to the greatest airborne concentrations of lead in the workplace.

(iii) Measurements of airborne lead made in the preceding 12 months may be used to satisfy the requirement to monitor under paragraph (d)(3)(i) if the sampling and analytical methods used meet the accuracy and confidence levels of paragraph (d)(9) of this section.

(4) *Positive initial determination and initial monitoring.* (i) Where a determination conducted under paragraphs (d) (2) and (3) of this section shows the possibility of any employee exposure at or above the action level, the employer shall conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.

(ii) Measurements of airborne lead made in the preceding 12 months may be used to satisfy this requirement if the sampling and analytical methods used meet the accuracy and confidence levels of paragraph (d)(9) of this section.

(5) *Negative initial determination.* Where a determination, conducted under paragraphs (d) (2) and (3) of this section is made that no employee is exposed to airborne concentrations of lead at or above the action level, the employer shall make a written record of such determination. The record shall include at least the information specified in paragraph (d)(3) of this section and shall also include the date of determination, location within the worksite, and the name and social security number of each employee monitored.

(6) *Frequency.* (i) If the initial monitoring reveals employee exposure to be below the action level the measurements need not be repeated except as otherwise provided in paragraph (d)(7) of this section.

(ii) If the initial determination or subsequent monitoring reveals employee exposure to be at or above the action level but below the permissible exposure limit the employer shall repeat monitoring in accordance with this paragraph at least every 6 months. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time the employer may discontinue monitoring for that employee except as otherwise provided in paragraph (d)(7) of this section.

(iii) If the initial monitoring reveals that employee exposure is above the permissible exposure limit the employer shall repeat monitoring quarterly. The employer shall continue monitoring at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the PEL but at or above the action level at which time the employer shall repeat monitoring for that employee at the frequency specified in paragraph (d)(6)(ii), except as otherwise provided in paragraph (d)(7) of this section.

(7) *Additional monitoring.* Whenever there has been a production, process, control or personnel change which may result in new or additional exposure to lead, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to lead, additional monitoring in accordance with this paragraph shall be conducted.

(8) *Employee notification.* (i) Within 5 working days after the receipt of monitoring results, the employer shall notify each employee in writing of the results which represent that employee's exposure.

(ii) Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the employer shall incude in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.

(9) *Accuracy of measurement.* The employer shall use a method of monitoring and analysis which has an accuracy (to a confidence level of 95%) of not less than plus or minus 20 percent for airborne concentrations of lead equal to or greater than 30 $\mu g/m^3$.

(e) *Methods of compliance*—(1) *Engineering and work practice controls.* (i) Where any employee is exposed to lead above the permissible exposure limit for more than 30 days per year, the employer shall implement engineering and work practice controls (including administrative controls) to reduce and maintain employee exposure to lead in accordance with the implementation schedule in Table I below, except to the extent that the employer can demonstrate that such controls are not feasible. Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the employer shall nonetheless use them to reduce exposures to the lowest feasible level and shall supplement them by the use of respiratory protection which complies with the requirements of paragraph (f) of this section.

(ii) Where any employee is exposed to lead above the permissible exposure limit, but for 30 days or less per year, the employer shall implement engineering controls to reduce exposures to 200 μg/m³, but thereafter may implement any combination of engineering, work practice (including administrative controls), and respiratory controls to reduce and maintain employee exposure to lead to or below 50 μg/m³.

TABLE I—IMPLEMENTATION SCHEDULE

Industry[1]	Compliance dates		
	200 μg/m³	100 μg/m³	50 μg/m³
Primary lead production	(3)	June 29, 1984[2]	June 29, 1991.[2]
Secondary lead production	(3)	June 29, 1984[2]	June 29, 1986.[2]
Lead acid battery manufacture	(3)	June 29, 1983[2]	June 29, 1986.[2]
Automobile manufacture/solder grinding	(3)	N/A	June 29, 1986.[2]
Electronics, gray iron foundries, ink manufacture, paints and coatings manufacture, wall paper manufacture, can manufacture and printing	(3)	N/A	June 29, 1982.[2]

TABLE I—IMPLEMENTATION SCHEDULE CONTINUED

Industry[1]	Compliance dates		
	200 μg/m³	100 μg/m³	50 μg/m³
Brass and bronze ingot manufacture, lead chemical manufacture, and secondary copper smelting	(3)	N/A	5 years.[4]
Non-ferrous foundries	(3)	N/A	5 years.[4,5]
All other industries	(3)	N/A	2½ years.[4]

[1] Includes ancillary activities located on the same worksite.

[2] This date is calculated by counting, from June 29, 1981 (the date when the United States Supreme Court denied certiorari and lifted the stay on the implementation of paragraph (e)(1)), the number of years specified for the particular industry in the original lead standard for compliance with the given airborne exposure level. The denial of certiorari followed a decision of the United States Court of Appeals for the District of Columbia Circuit finding compliance with paragraph (e)(1) to be feasible for the relevant industries.

[3] On the effective date of this standard, March 1, 1979. This continues an obligation from Table Z-2 of 29 CFR 1910.1000, which has been in effect since 1971 but was deleted from the Code of Federal Regulations upon the effectiveness of this standard.

[4] Expressed as the number of years from the date on which the court lifts the stay on the implementation of paragraph (e)(1) for the particular industry.

[5] Large non-ferrous foundries (20 or more employees) are required to achieve 50 μg/m³ by means of engineering and work practice controls. Small non-ferrous foundries (fewer than 20 employees), however, are only required to achieve 75 μg/m³ by such controls. All foundries are required to comply within five years.

(2) *Respiratory protection.* Where engineering and work practice controls do not reduce employee exposure to or below the 50 μg/m³ permissible exposure limit, the employer shall supplement these controls with respirators in accordance with paragraph (f).

(3) *Compliance program.* (i) Each employer shall establish and implement a written compliance program to reduce exposures to or below the permissible exposure limit, and interim levels if applicable, solely by means of engineering and work practice controls in accordance with the implementation schedule in paragraph (e)(1).

(ii) Written plans for these compliance programs shall include at least the following:

(A) A description of each operation in which lead is emitted; e.g. machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;

(B) A description of the specific means that will be employed to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to lead;

(C) A report of the technology considered in meeting the permissible exposure limit;

(D) Air monitoring data which documents the source of lead emissions;

(E) A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;

(F) A work practice program which includes items required under paragraphs (g), (h) and (i) of this regulation;

(G) An administrative control schedule required by paragraph (e)(6), if applicable;

(H) Other relevant information.

(iii) Written programs shall be submitted upon request to the Assistant Secretary and the Director, and shall be available at the worksite for examination and copying by the Assistant Secretary, Director, any affected employee or authorized employee representatives.

(iv) Written programs shall be revised and updated at least every 6 months to reflect the current status of the program.

(4) *Bypass of interim level.* Where an employer's compliance plan provides for a reduction of employee exposures to or below the PEL solely by means of engineering and work practice controls in accordance with the implementation schedule in table I, and the employer has determined that compliance with the 100 μg/m³ interim level would divert resources to the extent that it clearly precludes compliance, otherwise attainable, with the PEL by the required time, the employer may proceed with the plan to comply with the PEL in lieu of compliance with the interim level if:

(i) The compliance plan clearly documents the basis of the determination;

(ii) The employer takes all feasible steps to provide maximum protection for employees until the PEL is met; and

(iii) The employer notifies the OSHA Area Director nearest the affected workplace in writing within 10 working days of the completion or revision of the compliance plan reflecting the determination.

(5) *Mechanical ventilation.* (i) When ventilation is used to control exposure, measurements which demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure shall be made at least every 3 months. Measurements of the system's effectiveness in controlling exposure shall be made within 5 days of any change in production, process, or control which might result in a change in employee exposure to lead.

(ii) *Recirculation of air.* If air from exhaust ventilation is recirculated into the workplace, the employer shall assure that (A) the system has a high efficiency filter with reliable back-up filter; and (B) controls to monitor the concentration of lead in the return air and to bypass the recirculation system automatically if it fails are installed, operating, and maintained.

(6) *Administrative controls.* If administrative controls are used as a means of reducing employees TWA exposure to lead, the employer shall establish and implement a job rotation schedule which includes:

(i) Name or identification number of each affected employee;

(ii) Duration and exposure levels at each job or work station where each affected employee is located; and

(iii) Any other information which may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

(f) *Respiratory protection*—(1) *General.* Where the use of respirators is required under this section, the employer shall provide, at no cost to the employee, and assure the use of respirators which comply with the requirements of this paragraph. Respirators shall be used in the following circumstances:

(i) During the time period necessary to install or implement engineering or work practice controls, except that after the dates for compliance with the interim levels in table I, no employer shall require an employee to wear a negative pressure respirator longer than 4.4 hours per day;

(ii) In work situations in which engineering and work practice controls are not sufficient to reduce exposures to or below the permissible exposure limit; and

(iii) Whenever an employee requests a respirator.

(2) *Respirator selection.* (i) Where respirators are required under this section the employer shall select the appropriate respirator or combination of respirators from table II below.

TABLE II—RESPIRATORY PROTECTION FOR LEAD AEROSOLS

Airborne concentration of lead or condition of use	Required respirator [1]
Not in excess of 0.5 mg/m³ (10X PEL).	Half-mask, air-purifying respirator equipped with high efficiency filters.[2, 3]
Not in excess of 2.5 mg/m³ (50X PEL).	Full facepiece, air-purifying respirator with high efficiency filters.[3]
Not in excess of 50 mg/m³ (1000X PEL).	(1) Any powered, air-purifying respirator with high efficiency filters;[3] or (2) Half-mask supplied-air respirator operated in positive-pressure mode.[2]
Not in excess of 100 mg/m³ (2000XPEL).	Supplied-air respirators with full facepiece, hood, helmet, or suit, operated in positive pressure mode.
Greater than 100 mg/m³, unknown concentration or fire fighting.	Full facepiece, self-contained breathing apparatus operated in positive-pressure mode.

[1] Respirators specified for high concentrations can be used at lower concentrations of lead.

[2] Full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.

[3] A high efficiency particulate filter means 99.97 percent efficient against 0.3 micron size particles.

(ii) The employer shall provide a powered, air-purifying respirator in lieu of the respirator specified in Table II whenever:

(A) An employee chooses to use this type of respirator; and

(B) This respirator will provide adequate protection to the employee.

(iii) The employer shall select respirators from among those approved for protection against lead dust, fume, and mist by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

(3) *Respirator usage.* (i) The employer shall assure that the respirator issued to the employee exhibits minimum facepiece leakage and that the respirator is fitted properly.

(ii) Employers shall perform either quantitative or qualitative face fit tests at the time of initial fitting and at least every six months thereafter for each employee wearing negative pressure respirators. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, and shall be conducted in accordance with Appendix D. The tests shall be used to select facepieces that provide the required protection as prescribed in table II.

(iii) If an employee exhibits difficulty in breathing during the fitting test or during use, the employer shall make available to the employee an examination in accordance with paragraph (j)(3)(i)(C) of this section to determine whether the employee can wear a respirator while performing the required duty.

(4) *Respirator program.* (i) The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e) and (f).

(ii) The employer shall permit each employee who uses a filter respirator to change the filter elements whenever an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.

(iii) Employees who wear respirators shall be permitted to leave work areas to wash their face and respirator facepiece whenever necessary to prevent skin irritation associated with respirator use.

(g) *Protective work clothing and equipment*—(1) *Provision and use.* If an employee is exposed to lead above the PEL, without regard to the use of respirators or where the possibility of skin or eye irritation exists, the employer shall provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment such as, but not limited to:

(i) Coveralls or similar full-body work clothing;

(ii) Gloves, hats, and shoes or disposable shoe coverlets; and

(iii) Face shields, vented goggles, or other appropriate protective equipment which complies with §1910.133 of this title.

(2) *Cleaning and replacement.* (i) The employer shall provide the protective clothing required in paragraph (g)(1) of this section in a clean and dry condition at least weekly, and daily to employees whose exposure levels without regard to a respirator are over 200 μg/m³ of lead as an 8-hour TWA.

(ii) The employer shall provide for the cleaning, laundering, or disposal of protective clothing and equipment required by paragraph (g)(1) of this section.

(iii) The employer shall repair or replace required protective clothing and

equipment as needed to maintain their effectiveness.

(iv) The employer shall assure that all protective clothing is removed at the completion of a work shift only in change rooms provided for that purpose as prescribed in paragraph (i)(2) of this section.

(v) The employer shall assure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container in the change-room which prevents dispersion of lead outside the container.

(vi) The employer shall inform in writing any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead.

(vii) The employer shall assure that the containers of contaminated protective clothing and equipment required by paragraph (g)(2)(v) are labelled as follows:

CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

(viii) The employer shall prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.

(h) *Housekeeping*—(1) *Surfaces.* All surfaces shall be maintained as free as practicable of accumulations of lead.

(2) *Cleaning floors.* (i) Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.

(ii) Shoveling, dry or wet sweeping, and brushing may be used only where vacuuming or other equally effective methods have been tried and found not to be effective.

(3) *Vacuuming.* Where vacuuming methods are selected, the vacuums shall be used and emptied in a manner which minimizes the reentry of lead into the workplace.

(i) *Hygiene facilities and practices.* (1) The employer shall assure that in areas where employees are exposed to lead above the PEL, without regard to the use of respirators, food or beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied, except in change rooms, lunchrooms, and showers required under paragraphs (i)(2) through (i)(4) of this section.

(2) *Change rooms.* (i) The employer shall provide clean change rooms for employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators.

(ii) The employer shall assure that change rooms are equipped with separate storage facilities for protective work clothing and equipment and for street clothes which prevent cross-contamination.

(3) *Showers.* (i) The employer shall assure that employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators, shower at the end of the work shift.

(ii) The employer shall provide shower facilities in accordance with § 1910.141(d)(3) of this title.

(iii) The employer shall assure that employees who are required to shower pursuant to paragraph (i)(3)(i) do not leave the workplace wearing any clothing or equipment worn during the work shift.

(4) *Lunchrooms.* (i) The employer shall provide lunchroom facilities for employees who work in areas where their airborne exposure to lead is above the PEL, without regard to the use of respirators.

(ii) The employer shall assure that lunchroom facilities have a temperature controlled, positive pressure, filtered air supply, and are readily accessible to employees.

(iii) The employer shall assure that employees who work in areas where their airborne exposure to lead is above the PEL without regard to the use of a respirator wash their hands and face prior to eating, drinking, smoking or applying cosmetics.

(iv) The employer shall assure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface lead dust has been removed by vacuuming, downdraft booth, or other cleaning method.

(5) *Lavatories.* The employer shall provide an adequate number of lavatory facilities which comply with § 1910.141(d) (1) and (2) (ii) through (vii) of this title.

(j) *Medical surveillance*—(1) *General.* (i) The employer shall institute a medical surveillance program for all employees who are or may be exposed above the action level for more than 30 days per year.

(ii) The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician.

(iii) The employer shall provide the required medical surveillance including multiple physician review under paragraph (j)(3)(iii) without cost to employees and at a reasonable time and place.

(2) *Biological monitoring*—(i) *Blood lead and ZPP level sampling and analysis.* The employer shall make available biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels to each employee covered under paragraph (j)(1)(i) of this section on the following schedule:

(A) At least every 6 months to each employee covered under paragraph (j)(1)(i) of this section;

(B) At least every two months for each employee whose last blood sampling and analysis indicated a blood lead level at or above 40 µg/100 g of whole blood. This frequency shall continue until two consecutive blood samples and analyses indicate a blood lead level below 40 µg/100 g of whole blood; and

(C) At least monthly during the removal period of each employee removed from exposure to lead due to an elevated blood lead level.

(ii) *Follow-up blood sampling tests.* Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds the numerical criterion for medical removal under paragraph (k)(1)(i), the employer shall provide a second (follow-up) blood sampling test within two weeks after the employer receives the results of the first blood sampling test.

(iii) *Accuracy of blood lead level sampling and analysis.* Blood lead level sampling and analysis provided pursuant to this section shall have an accuracy (to a confidence level of 95 percent) within plus or minus 15 percent or 6 µg/100ml, whichever is greater, and shall be conducted by a laboratory licensed by the Center for Disease Control, United States Department of Health, Education and Welfare (CDC) or which has received a satisfactory grade in blood lead proficiency testing from CDC in the prior twelve months.

(iv) *Employee notification.* Within five working days after the receipt of biological monitoring results, the employer shall notify in writing each employee whose blood lead level exceeds 40 µg/100 g: (A) of that employee's blood lead level and (B) that the standard requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level exceeds the numerical criterion for medical removal under paragraph (k)(1)(i) of this section.

(3) *Medical examinations and consultations*—(i) *Frequency.* The employer shall make available medical examinations and consultations to each employee covered under paragraph (j)(1)(i) of this section on the following schedule:

(A) At least annually for each employee for whom a blood sampling

test conducted at any time during the preceding 12 months indicated a blood lead level at or above 40 μg/100 g;

(B) Prior to assignment for each employee being assigned for the first time to an area in which airborne concentrations of lead are at or above the action level;

(C) As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during use; and

(D) As medically appropriate for each employee either removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise limited pursuant to a final medical determination.

(ii) *Content.* Medical examinations made available pursuant to paragraph (j)(3)(i) (A) through (B) of this section shall include the following elements:

(A) A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene), and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological problems;

(B) A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems. Pulmonary status should be evaluated if respiratory protection will be used;

(C) A blood pressure measurement;

(D) A blood sample and analysis which determines:

(*1*) Blood lead level;

(*2*) Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;

(*3*) Zinc protoporphyrin;

(*4*) Blood urea nitrogen; and,

(*5*) Serum creatinine;

(E) A routine urinalysis with microscopic examination; and

(F) Any laboratory or other test which the examining physician deems necessary by sound medical practice.

The content of medical examinations made available pursuant to paragraph (j)(3)(i) (C) through (D) of this section shall be determined by an examining physician and, if requested by an employee, shall include pregnancy testing or laboratory evaluation of male fertility.

(iii) *Multiple physician review mechanism.* (A) If the employer selects the initial physician who conducts any medical examination or consultation provided to an employee under this section, the employee may designate a second physician:

(*1*) To review any findings, determinations or recommendations of the initial physician; and

(*2*) To conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review.

(B) The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or consultation pursuant to this section. The employer may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within fifteen (15) days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:

(*1*) The employee informing the employer that he or she intends to seek a second medical opinion, and

(*2*) The employee initiating steps to make an appointment with a second physician.

(C) If the findings, determinations or recommendations of the second physician differ from those of the initial physician, then the employer and the employee shall assure that efforts are made for the two physicians to resolve any disagreement.

(D) If the two physicians have been unable to quickly resolve their disagreement, then the employer and the employee through their respective physicians shall designate a third physician:

(*1*) To review any findings, determinations or recommendations of the prior physicians; and

(*2*) To conduct such examinations, consultations, laboratory tests and discussions with the prior physicians as the third physician deems necessary to resolve the disagreement of the prior physicians.

(E) The employer shall act consistent with the findings, determinations and recommendations of the third physician, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.

(iv) *Information provided to examining and consulting physicians.* (A) The employer shall provide an initial physician conducting a medical examination or consultation under this section with the following information:

(*1*) A copy of this regulation for lead including all Appendices;

(*2*) A description of the affected employee's duties as they relate to the employee's exposure;

(*3*) The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);

(*4*) A description of any personal protective equipment used or to be used;

(*5*) Prior blood lead determinations; and

(*6*) All prior written medical opinions concerning the employee in the employer's possession or control.

(B) The employer shall provide the foregoing information to a second or third physician conducting a medical examination or consultation under this section upon request either by the second or third physician, or by the employee.

(v) *Written medical opinions.* (A) The employer shall obtain and furnish the employee with a copy of a written medical opinion from each examining or consulting physician which contains the following information:

(*1*) The physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to lead;

(*2*) Any recommended special protective measures to be provided to the employee, or limitations to be placed upon the employee's exposure to lead;

(*3*) Any recommended limitation upon the employee's use of respirators, including a determination of whether the employee can wear a powered air purifying respirator if a physician determines that the employee cannot wear a negative pressure respirator; and

(*4*) The results of the blood lead determinations.

(B) The employer shall instruct each examining and consulting physician to:

(*1*) Not reveal either in the written opinion, or in any other means of communication with the employer, findings, including laboratory results, or diagnoses unrelated to an employee's occupational exposure to lead; and

(*2*) Advise the employee of any medical condition, occupational or nonoccupational, which dictates further medical examination or treatment.

(vi) *Alternate Physician Determination Mechanisms.* The employer and an employee or authorized employee representative may agree upon the use of any expeditious alternate physician determination

mechanism in lieu of the multiple physician review mechanism provided by this paragraph so long as the alternate mechanism otherwise satisfies the requirements contained in this paragraph.

(4) *Chelation.* (i) The employer shall assure that any person whom he retains, employs, supervises or controls does not engage in prophylactic chelation of any employee at any time.

(ii) If therapeutic or diagnostic chelation is to be performed by any person in paragraph (j)(4)(i), the employer shall assure that it be done under the supervision of a licensed physician in a clinical setting with thorough and appropriate medical monitoring and that the employee is notified in writing prior to its occurrence.

(k) *Medical Removal Protection*—(1) *Temporary medical removal and return of an employee*—(i) *Temporary removal due to elevated blood lead levels*—(A) *First year of the standard.* During the first year following the effective date of the standard, the employer shall remove an employee from work having a daily eight hour TWA exposure to lead at or above 100 μg/m³ on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 80 μg/100 g of whole blood;

(B) *Second year of the standard.* During the second year following the effective date of the standard, the employer shall remove an employee from work having a daily 8-hour TWA exposure to lead at or above 50 μg/m³ on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 70 μg/100 g of whole blood;

(C) *Third year of the standard, and thereafter.* Beginning with the third year following the effective date of the standard, the employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that a periodic and a follow-up blood sampling test conducted pursuant to this section indicate that the employee's blood lead level is at or above 60 μg/100 g of whole blood; and,

(D) *Fifth year of the standard, and thereafter.* Beginning with the fifth year following the effective date of the standard, the employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that the average of the last three blood sampling tests conducted pursuant to this section (or the average of all blood sampling tests conducted over the previous six (6) months, whichever is longer) indicates that the employee's blood lead level is at or above 50 μg/100 g of whole blood; provided, however, that an employee need not be removed if the last blood sampling test indicates a blood lead level at or below 40 μg/100 g of whole blood.

(ii) *Temporary removal due to a final medical determination.* (A) The employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

(B) For the purposes of this section, the phrase "final medical determination" shall mean the outcome of the multiple physician review mechanism or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section.

(C) Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, the employer shall implement and act consistent with the recommendation.

(iii) *Return of the employee to former job status.* (A) The employer shall return an employee to his or her former job status:

(*1*) For an employee removed due to a blood lead level at or above 80 μg/100 g, when two consecutive blood sampling tests indicate that the employee's blood lead level is at or below 60 μg/100 g of whole blood;

(*2*) For an employee removed due to a blood lead level at or above 70 μg/100 g, when two consecutive blood sampling tests indicate that the employee's blood lead level is at or below 50 μg/100 g of whole blood;

(*3*) For an employee removed due to a blood lead level at or above 60 μg/100 g, or due to an average blood lead level at or above 50 μg/100 g, when two consecutive blood sampling tests indicate that the employee's blood lead level is at or below 40 μg/100 g of whole blood;

(*4*) For an employee removed due to a final medical determination, when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

(B) For the purposes of this section, the requirement that an employer return an employee to his or her former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.

(iv) *Removal of other employee special protective measure or limitations.* The employer shall remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.

(v) *Employer options pending a final medical determination.* Where the multiple physician review mechanism, or alternate medical determination mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, the employer shall act as follows:

(A) *Removal.* The employer may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status.

(B) *Return.* The employer may return the employee to his or her former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions. If (*1*) the initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician or

(*2*) The employee has been on removal status for the preceding eighteen months due to an elevated blood lead level, then the employer shall await a final medical determination.

(2) *Medical removal protection benefits*—(i) *Provision of medical removal protection benefits.* The

employer shall provide to an employee up to eighteen (18) months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this section.

(ii) *Definition of medical removal protection benefits.* For the purposes of this section, the requirement that an employer provide medical removal protection benefits means that the employer shall maintain the earnings, seniority and other employment rights and benefits of an employee as though the employee had not been removed from normal exposure to lead or otherwise limited.

(iii) *Follow-up medical surveillance during the period of employee removal or limitation.* During the period of time that an employee is removed from normal exposure to lead or otherwise limited, the employer may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this section.

(iv) *Workers' compensation claims.* If a removed employee files a claim for workers' compensation payments for a lead-related disability, then the employer shall continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by such amount. The employer shall receive no credit for workers' compensation payments received by the employee for treatment related expenses.

(v) *Other credits.* The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from employment with another employer made possible by virtue of the employee's removal.

(vi) *Employees whose blood lead levels do not adequately decline within 18 months of removal.* The employer shall take the following measures with respect to any employee removed from exposure to lead due to an elevated blood lead level whose blood lead level has not declined within the past eighteen (18) months of removal so that the employee has been returned to his or her former job status:

(A) The employer shall make available to the employee a medical examination pursuant to this section to obtain a final medical determination with respect to the employee;

(B) The employer shall assure that the final medical determination obtained indicates whether or not the employee may be returned to his or her former job status, and if not, what steps should be taken to protect the employee's health;

(C) Where the final medical determination has not yet been obtained, or once obtained indicates that the employee may not yet be returned to his or her former job status, the employer shall continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to his or her former job status.

(D) Where the employer acts pursuant to a final medical determination which permits the return of the employee to his or her former job status despite what would otherwise be an unacceptable blood lead level, later questions concerning removing the employee again shall be decided by a final medical determination. The employer need not automatically remove such an employee pursuant to the blood lead level removal criteria provided by this section.

(vii) *Voluntary Removal or Restriction of An Employee.* Where an employer, although not required by this section to do so, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's medical condition, the employer shall provide medical removal protection benefits to the employee equal to that required by paragraph (k)(2)(i) of this section.

(l) *Employee information and training*—(1) *Training program.* (i) Each employer who has a workplace in which there is a potential exposure to airborne lead at any level shall inform employees of the content of Appendices A and B of this regulation.

(ii) The employer shall institute a training program for and assure the participation of all employees who are subject to exposure to lead at or above the action level or for whom the possibility of skin or eye irritation exists.

(iii) The employer shall provide initial training by 180 days from the effective date for those employees covered by paragraph (l)(1) (ii) on the standard's effective date and prior to the time of initial job assignment for those employees subsequently covered by this paragraph.

(iv) The training program shall be repeated at least annually for each employee.

(v) The employer shall assure that each employee is informed of the following:

(A) The content of this standard and its appendices;

(B) The specific nature of the operations which could result in exposure to lead above the action level;

(C) The purpose, proper selection, fitting, use, and limitations of respirators;

(D) The purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females);

(E) The engineering controls and work practices associated with the employee's job assignment;

(F) The contents of any compliance plan in effect; and

(G) Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician;

(2) *Access to information and training materials.* (i) The employer shall make readily available to all affected employees a copy of this standard and its appendices.

(ii) The employer shall provide, upon request, all materials relating to the employee information and training program to the Assistant Secretary and the Director.

(iii) In addition to the information required by paragraph (l)(1)(v), the employer shall include as part of the training program, and shall distribute to employees, any materials pertaining to the Occupational Safety and Health Act, the regulations issued pursuant to that Act, and this lead standard, which are made available to the employer by the Assistant Secretary.

(m) *Signs*—(1) *General.* (i) The employer may use signs required by other statutes, regulations or ordinances in addition to, or in combination with, signs required by this paragraph.

(ii) The employer shall assure that no statement appears on or near any sign required by this paragraph which contradicts or detracts from the meaning of the required sign.

(2) *Signs.* (i) The employer shall post the following warning signs in each work area where the PEL is exceeded:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

(ii) The employer shall assure that signs required by this paragraph are illuminated and cleaned as necessary so that the legend is readily visible.

(n) *Recordkeeping*—(1) *Exposure monitoring.* (i) The employer shall establish and maintain an accurate record of all monitoring required in paragraph (d) of this section.

(ii) This record shall include:

(A) The date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable;

(B) A description of the sampling and analytical methods used and evidence of their accuracy;

(C) The type of respiratory protective devices worn, if any;

(D) Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and

(E) The environmental variables that could affect the measurement of employee exposure.

(iii) The employer shall maintain these monitoring records for at least 40 years or for the duration of employment plus 20 years, whichever is longer.

(2) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by paragraph (j) of this section.

(ii) This record shall include:

(A) The name, social security number, and description of the duties of the employee;

(B) A copy of the physician's written opinions;

(C) Results of any airborne exposure monitoring done for that employee and the representative exposure levels supplied to the physician; and

(D) Any employee medical complaints related to exposure to lead.

(iii) The employer shall keep, or assure that the examining physician keeps, the following medical records:

(A) A copy of the medical examination results including medical and work history required under paragraph (j) of this section;

(B) A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information;

(C) A copy of the results of biological monitoring.

(iv) The employer shall maintain or assure that the physician maintains those medical records for at least 40 years, or for the duration of employment plus 20 years, whichever is longer.

(3) *Medical removals.* (i) The employer shall establish and maintain an accurate record for each employee removed from current exposure to lead pursuant to paragraph (k) of this section.

(ii) Each record shall include:

(A) The name and social security number of the employee;

(B) The date on each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to his or her former job status;

(C) A brief explanation of how each removal was or is being accomplished; and

(D) A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level.

(iii) The employer shall maintain each medical removal record for at least the duration of an employee's employment.

(4) *Availability.* (i) The employer shall make available upon request all records required to be maintained by paragraph (n) of this section to the Assistant Secretary and the Director for examination and copying.

(ii) Environmental monitoring, medical removal, and medical records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)–(e) and (2)–(i). Medical removal records shall be provided in the same manner as environmental monitoring records.

(5) *Transfer of records.* (i) Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by paragraph (n) of this section.

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records required to be maintained by this section for the prescribed period, these records shall be transmitted to the Director.

(iii) At the expiration of the retention period for the records required to be maintained by this section, the employer shall notify the Director at least 3 months prior to the disposal of such records and shall transmit those records to the Director if requested within the period.

(iv) The employer shall also comply with any additional requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(o) *Observation of monitoring.* (1) *Employee observation.* The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to lead conducted pursuant to paragraph (d) of this section.

(2) *Observation procedures.* (i) Whenever observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing or equipment is required, the employer shall provide the observer with and assure the use of such respirators, clothing and such equipment, and shall require the observer to comply with all other applicable safety and health procedures.

(ii) Without interfering with the monitoring, observers shall be entitled to:

(A) Receive an explanation of the measurement procedures;

(B) Observe all steps related to the monitoring of lead performed at the place of exposure; and

(C) Record the results obtained or receive copies of the results when returned by the laboratory.

(p) *Effective date.* This standard shall become effective March 1, 1979.

(q) *Appendices.* The information contained in the appendices to this section is not intended by itself, to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation.

(r) *Startup dates.* All obligations of this standard commence on the effective date except as follows:

(1) The initial determination under paragraph (d)(2) shall be made as soon as possible but no later than 30 days from the effective date.

(2) Initial monitoring under paragraph (d)(4) shall be completed as soon as possible but no later than 90 days from the effective date.

(3) Initial biological monitoring and medical examinations under paragraph (j) shall be completed as soon as possible but no later than 180 days from the effective date. Priority for biological monitoring and medical examinations shall be given to employees whom the employer believes to be at greatest risk from continued exposure.

(4) Initial training and education shall be completed as soon as possible but no later than 180 days from the effective date.

(5) Hygiene and lunchroom facilities under paragraph (i) shall be in operation as soon as possible but no later than 1 year from the effective year.

(6)(i) Respiratory protection required by paragraph (f) shall be provided as

soon as possible but no later than the following schedule:

(A) Employees whose 8-hour TWA exposure exceeds 200 μg/m³—on the effective date.

(B) Employees whose 8-hour TWA exposure exceeds the PEL but is less than 200 μg/m³—150 days from the effective date.

(C) Powered, air-purifying respirators provided under (f)(2)(ii)—210 days from the effective date.

(D) Quantitative fit testing required under (f)(3)(ii)—one year from effective date. Qualitative fit testing is required in the interim.

(7)(i) Written compliance plans required by paragraph (e)(3) shall be completed and available for inspection and copying as soon as possible but no later than the following schedule:

(A) Employers for whom compliance with the PEL or interim level is required within 1 year from the effective date—6 months from the effective date.

(B) Employers in secondary lead smelting and refining and in lead storage battery manufacturing—1 year from the effective date.

(C) Employers in primary smelting and refining industry—1 year from the effective date for the interim level; 5 years from the effective date for PEL.

(D) Plans for construction of hygiene facilities, if required—6 months from the effective date.

(E) All other industries—1 year from the date on which the court lifts the stay on the implementation of paragraph (e)(1) for the particular industry.

(8) The permissible exposure limit in paragraph (c) shall become effective 150 days from the effective date.

(Approved by the Office of Management and Budget under control number 1218–0092)

Appendix A to § 1915.1025—Substance Data Sheet for Occupational Exposure to Lead

I. Substance Identification

A. *Substance:* Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds.

B. *Compounds Covered by the Standard:* The word "lead" when used in this standard means elemental lead, all inorganic lead compounds and a class of organic lead compounds called lead soaps. This standard does not apply to other organic lead compounds.

C. *Uses:* Exposure to lead occurs in at least 120 different occupations, including primary and secondary lead smelting, lead storage battery manufacturing, lead pigment manufacturing and use, solder manufacturing and use, shipbuilding and ship repairing, auto manufacturing, and printing.

D. *Permissible Exposure:* The Permissible Exposure Limit (PEL) set by the standard is 50 micrograms of lead per cubic meter of air (50 μg/m³), averaged over an 8-hour workday.

E. *Action Level:* The standard establishes an action level of 30 micrograms per cubic meter of air (30 μg/m³), time weighted average, based on an 8-hour work-day. The action level initiates several requirements of the standard, such as exposure monitoring, medical surveillance, and training and education.

II. Health Hazard Data

A. *Ways in which lead enters your body.* When absorbed into your body in certain doses lead is a toxic substance. The object of the lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed.

Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin. When lead is scattered in the air as a dust, fume or mist it can be inhaled and absorbed through you lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion.

A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole body systems.

B. *Effects of overexposure to lead*—(1) *Short term (acute) overexposure.* Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

(2) *Long-term (chronic) overexposure.* Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain.

Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy.

Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible.

Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and stillbirth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women. The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood.

Overexposure to lead also disrupts the blood-forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased oxygen carrying capacity in the blood.

(3) *Health protection goals of the standard.* Prevention of adverse health effects for most workers from exposure to lead throughout a working lifetime requires that worker blood lead (PbB) levels be maintained at or below forty micrograms per one hundred grams of whole blood (40 μg/100g). The blood lead

levels of workers (both male and female workers) who intend to have children should be maintained below 30 µg/100g to minimize adverse reproductive health effects to the parents and to the developing fetus.

The measurement of your blood lead level is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels (PbB) are most often reported in units of milligrams (mg) or micrograms (µg) of lead (1 mg=1000 µg) per 100 grams (100g), 100 milliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime PbB's are expressed in the form of mg% or µg%. This is a shorthand notation for 100g, 100 ml, or dl.

PbB measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. PbB measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead-related diseases, however, has focused heavily on associations between PbBs and various diseases. As a result, your PbB is an important indicator of the likelihood that you will gradually acquire a lead-related health impairment or disease.

Once your blood lead level climbs above 40 µg/100g, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular PbB in a given person will cause a particular effect. Studies have associated fatal encephalopathy with PbBs as low as 150 µg/100g. Other studies have shown other forms of diseases in some workers with PbBs well below 80 µg/100g. Your PbB is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated PbBs. The longer you have an elevated PbB, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage.

The best way to prevent all forms of lead-related impairments and diseases—both short term and long term- is to maintain your PbB below 40 µg/100g. The provisions of the standard are designed with this end in mind. Your employer has prime responsibility to assure that the provisions of the standard are complied with both by the company and by individual workers. You as a worker, however, also have a responsibility to assist your employer in complying with the standard. You can play a key role in protecting your own health by learning about the lead hazards and their control, learning what the standard requires, following the standard where it governs your own actions, and seeing that your employer complies with provisions governing his actions.

(4) *Reporting signs and symptoms of health problems.* You should immediately notify your employer if you develop signs or symptoms associated with lead poisoning or if you desire medical advice concerning the effects of current or past exposure to lead on your ability to have a healthy child. You should also notify your employer if you have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases your employer must make available to you appropriate medical examinations or consultations. These must be provided at no cost to you and at a reasonable time and place.

The standard contains a procedure whereby you can obtain a second opinion by a physician of your choice if the employer selected the initial physician.

Appendix B to § 1915.1025—Employee Standard Summary

This appendix summarizes key provisions of the standard that you as a worker should become familiar with.

I. Permissible Exposure Limit (pel)—paragraph (c)

The standards sets a permissible exposure limit (PEL) of fifty micrograms of lead per cubic meter of air (50 µg/m^3), averaged over an 8-hour work-day. This is the highest level of lead in air to which you may be permissibly exposed over an 8-hour workday. Since it is an 8-hour average it permits short exposures above the PEL so long as for each 8-hour work day your average exposure does not exceed the PEL.

This standard recognizes that your daily exposure to lead can extend beyond a typical 8-hour workday as the result of overtime or other alterations in your work schedule. To deal with this, the standard contains a formula which reduces your permissible exposure when you are exposed more than 8 hours. For example, if you are exposed to lead for 10 hours a day, the maximum permitted average exposure would be 40 µg/m^3.

II. Exposure Monitoring—paragraph (d)

If lead is present in the workplace where you work in any quantity, your employer is required to make an initial determination of whether the action level is exceeded for any employee. This initial determination must include instrument monitoring of the air for the presence of lead and must cover the exposure of a representative number of employees who are reasonably believed to have the highest exposure levels. If your employer has conducted appropriate air sampling for lead in the past year he may use these results. If there have been any employee complaints of symptoms which may be attributable to exposure to lead or if there is any other information or observations which would indicate employee exposure to lead, this must also be considered as part of the initial determination. This initial determination must have been completed by March 31, 1979. If this initial determination shows that a reasonable possibility exists that *any* employee may be exposed, without regard to respirators, over the action level (30 µg/m^3) your employer must set up an air monitoring program to determine the exposure level of every employee exposed to lead at your workplace.

In carrying out this air monitoring program, your employer is not required to monitor the exposure of every employee, but he must monitor a representative number of employees and job types. Enough sampling must be done to enable each employee's exposure level to be reasonably represented by at least one full shift (at least 7 hours) air sample. In addition, these air samples must be taken under conditions which represent each employee's *regular*, daily exposure to lead. All initial exposure monitoring must have been completed by May 30, 1979.

If you are exposed to lead and air sampling is performed, your employer is required to quickly notify you in writing of air monitoring results which represent your exposure. If the results indicate your exposure exceeds the PEL (without regard to your use of respirators), then your employer must also notify you of this in writing, and provide you with a description of the corrective action that will be taken to reduce your exposure.

Your exposure must be rechecked by monitoring every six months if your exposure is over the action level but below the PEL. Air monitoring must be repeated every 3 months if you are exposed over the PEL. Your employer may discontinue monitoring for you if 2 consecutive measurements, taken at least two weeks apart, are below the action level. However, whenever there is a production, process, control, or personnel change at your workplace which may result in new or additional exposure to lead, or whenever there is any other reason to suspect a change which may result in new or additional exposure to lead, your employer must perform additional monitoring.

III. Methods of Compliance—paragraph (e)

Your employer is required to assure that no employee is exposed to lead in excess of the PEL. The standard establishes a priority of methods to be used to meet the PEL.

IV. Respiratory Protection—paragraph (f)

Your employer is required to provide and assure your use of respirators when your exposure to lead is not controlled below the PEL by other means. The employer must pay the cost of the respirator. Whenever you request one, your employer is also required to provide you a respirator even if your air exposure level does not exceed the PEL. You might desire a respirator when, for example, you have received medical advice that your lead absorption should be decreased. Or, you may intend to have children in the near future, and want to reduce the level of lead in your body to minimize adverse reproductive effects. While respirators are the least satisfactory means of controlling your exposure, they are capable of providing significant protection if properly chosen, fitted, worn, cleaned, maintained, and replaced when they stop providing adequate protection.

Your employer is required to select respirators from the seven types listed in Table II of the Respiratory Protection section of the standard. Any respirator chosen must be approved by the Mine Safety and Health Administration (MSHA) or the National Institute for Occupational Safety and Health (NIOSH). This respirator selection table will enable your employer to choose a type of respirator which will give you a proper amount of protection based on your airborne lead exposure. Your employer may select a type of respirator that provides greater

protection than that required by the standard; that is, one recommended for a higher concentration of lead than is present in your workplace. For example, a powered air purifying respirator (PAPR) is much more protective than a typical negative pressure respirator, and may also be more comfortable to wear. A PAPR has a filter, cartridge or canister to clean the air, and a power source which continuously blows filtered air into your breathing zone. Your employer might make a PAPR available to you to ease the burden of having to wear a respirator for long periods of time. The standard provides that you can obtain a PAPR upon request.

Your employer must also start a Respiratory Protection Program. This program must include written procedures for the proper selection, use, cleaning, storage, and maintenance of respirators.

Your employer must assure that your respirator facepiece fits properly. Proper fit of a respirator facepiece is critical. Obtaining a proper fit on each employee may require your employer to make available two or three different mask types. In order to assure that your respirator fits properly and that facepiece leakage is minimized, beginning on November 12, 1982, your employer must give you either a qualitative fit test in accordance with Appendix D of the standard or a quantitative fit test if you use a negative pressure respirator. Any respirator which has a filter, cartridge or canister which cleans the work room air before you breathe it and which requires the force of your inhalation to draw air thru the filtering element is a negative pressure respirator. A positive pressure respirator supplies air to you directly. A quantitative fit test uses a sophisticated machine to measure the amount, if any, of test material that leaks into the facepiece of your respirator.

You must also receive from your employer proper training in the use of respirators. Your employer is required to teach you how to wear a respirator, to know why it is needed, and to understand its limitations.

Until March 1, 1980, your employer must test the effectiveness of your negative pressure respirator initially and at least every six months thereafter with a "qualitative fit test." In this test, the fit of the facepiece is checked by seeing if you can smell a substance placed outside the respirator. If you can, there is appreciable leakage where the facepiece meets your face.

The standard provides that if your respirator uses filter elements, you must be given an opportunity to change the filter elements whenever an increase in breathing resistance is detected. You also must be permitted to periodically leave your work area to wash your face and respirator facepiece whenever necessary to prevent skin irritation. If you ever have difficulty in breathing during a fit test or while using a respirator, your employer must make a medical examination available to you to determine whether you can safely wear a respirator. The result of this examination may be to give you a positive pressure respirator (which reduces breathing resistance) or to provide alternative means of protection.

V. Protective Work Clothing and Equipment—paragraph (g)

If you are exposed to lead above the PEL, or if you are exposed to lead compounds such as lead arsenate or lead azide which can cause skin and eye irritation, your employer must provide you with protective work clothing and equipment appropriate for the hazard. If work clothing is provided, it must be provided in a clean and dry condition at least weekly, and daily if your airborne exposure to lead is greater than 200 $\mu g/m^3$. Appropriate protective work clothing and equipment can include coveralls or similar full-body work clothing, gloves, hats, shoes or disposable shoe coverlets, and face shields or vented goggles. Your employer is required to provide all such equipment at no cost to you. He is responsible for providing repairs and replacement as necessary, and also is responsible for the cleaning, laundering or disposal of protective clothing and equipment. Contaminated work clothing or equipment must be removed in change rooms and not worn home or you will extend your exposure and expose your family since lead from your clothing can accumulate in your house, car, etc. Contaminated clothing which is to be cleaned, laundered or disposed of must be placed in closed containers in the change room. At no time may lead be removed from protective clothing or equipment by any means which disperses lead into the workroom air.

VI. Housekeeping—paragraph (h)

Your employer must establish a housekeeping program sufficient to maintain all surfaces as free as practicable of accumulations of lead dust. Vacuuming is the preferred method of meeting this requirement, and the use of compressed air to clean floors and other surfaces is absolutely prohibited. Dry or wet sweeping, shoveling, or brushing may not be used except where vaccuming or other equally effective methods have been tried and do not work. Vacuums must be used and emptied in a manner which minimizes the reentry of lead into the workplace.

VII. Hygiene Facilities and Practices—paragraph (i)

The standard requires that change rooms, showers, and filtered air lunchrooms be constructed and made available to workers exposed to lead above the PEL. When the PEL is exceeded the employer must assure that food and beverage is not present or consumed, tobacco products are not present or used, and cosmetics are not applied, except in these facilities. Change rooms, showers, and lunchrooms, must be used by workers exposed in excess of the PEL. After showering, *no* clothing or equipment worn during the shift may be worn home, and this includes shoes and underwear. Your own clothing worn during the shift should be carried home and cleaned carefully so that it does not contaminate your home. Lunchrooms may not be entered with protective clothing or equipment unless surface dust has been removed by vacuuming, downdraft booth, or other cleaning method. Finally, workers exposed above the PEL must wash both their hands and faces prior to eating, drinking, smoking or applying cosmetics.

All of the facilities and hygiene practices just discussed are essential to minimize additional sources of lead absorption from inhalation or ingestion of lead that may accumulate on you, your clothes, or your possessions. Strict compliance with these provisions can virtually eliminate several sources of lead exposure which significantly contribute to excessive lead absorption.

VIII. Medical Surveillance—paragraph (j)

The medical surveillance program is part of the standard's comprehensive approach to the prevention of lead-related disease. Its purpose is to supplement the main thrust of the standard which is aimed at minimizing airborne concentrations of lead and sources of ingestion. Only medical surveillance can determine if the other provisions of the standard have affectively protected you as an individual. Compliance with the standard's provision will protect most workers from the adverse effects of lead exposure, but may not be satisfactory to protect individual workers (1) who have high body burdens of lead acquired over past years, (2) who have additional uncontrolled sources of non-occupational lead exposure, (3) who exhibit unusual variations in lead absorption rates, or (4) who have specific non-work related medical conditions which could be aggravated by lead exposure (e.g., renal disease, anemia). In addition, control systems may fail, or hygiene and respirator programs may be inadequate. Periodic medical surveillance of individual workers will help detect those failures. Medical surveillance will also be important to protect your reproductive ability—regardless of whether you are a man or woman.

All medical surveillance required by the standard must be performed by or under the supervision of a licensed physician. The employer must provide required medical surveillance without cost to employees and at a reasonable time and place. The standard's medical surveillance program has two parts-periodic biological monitoring and medical examinations.

Your employer's obligation to offer you medical surveillance is triggered by the results of the air monitoring program. Medical surveillance must be made available to all employees who are exposed in excess of the action level for more than 30 days a year. The initial phase of the medical surveillance program, which includes blood lead level tests and medical examinations, must be completed for all covered employees no later than August 28, 1979. Priority within this first round of medical surveillance must be given to employees whom the employer believes to be at greatest risk from continued exposure (for example, those with the longest prior exposure to lead, or those with the highest current exposure). Thereafter, the employer must periodically make medical surveillance—both biological monitoring and medical examinations—available to all covered employees.

Biological monitoring under the standard consists of blood lead level (PbB) and zinc protoporphyrin tests at least every 6 months after the initial PbB test. A zinc

protoporphyrin (ZPP) test is a very useful blood test which measures an effect of lead on your body. Thus biological monitoring under the standard is currently limited to PbB testing. If a worker's PbB exceeds 40 µg/100g the monitoring frequency must be increased from every 6 months to at least every 2 months and not reduced until two consecutive PbBs indicate a blood lead level below 40 µg/100g. Each time your PbB is determined to be over 40 µg/100g, your employer must notify you of this in writing within five working days of his receipt of the test results. The employer must also inform you that the standard requires temporary medical removal with economic protection when your PbB exceeds certain criteria. (See Discussion of Medical Removal Protection—Paragraph (k).) During the first year of the standard, this removal criterion is 80 µg/100g. Anytime your PbB exceeds 80 µg/100g your employer must make available to you a prompt follow-up PbB test to ascertain your PbB. If the two tests both exceed 80 µg/100g and you are temporarily removed, then your employer must make successive PbB tests available to you on a monthly basis during the period of your removal.

Medical examinations beyond the initial one must be made available on an annual basis if your blood lead level exceeds 40 µg/100g at any time during the preceding year. The initial examination will provide information to establish a baseline to which subsequent data can be compared. An initial medical examination must also be made available (prior to assignment) for each employee being assigned for the first time to an area where the airborne concentration of lead equals or exceeds the action level. In addition, a medical examination or consultation must be made available as soon as possible if you notify your employer that you are experiencing signs or symptoms commonly associated with lead poisoning or that you have difficulty breathing while wearing a respirator or during a respirator fit test. You must also be provided a medical examination or consultation if you notify your employer that you desire medical advice concerning the effects of current or past exposure to lead on your ability to procreate a healthy child.

Finally, appropriate follow-up medical examinations or consultations may also be provided for employees who have been temporarily removed from exposure under the medical removal protection provisions of the standard. (See Part IX, below.)

The standard specifies the minimum content of pre-assignment and annual medical examinations. The content of other types of medical examinations and consultations is left up to the sound discretion of the examining physician. Pre-assignment and annual medical examinations must include (1) a detailed work history and medical history, (2) a thorough physical examination, and (3) a series of laboratory tests designed to check your blood chemistry and your kidney function. In addition, at any time upon your request, a laboratory evaluation of male fertility will be made (microscopic examination of a sperm sample), or a pregnancy test will be given.

The standard does not require that you participate in any of the medical procedures, tests, etc. which your employer is required to make available to you. Medical surveillance can, however, play a very important role in protecting your health. You are strongly encouraged, therefore, to participate in a meaningful fashion. The standard contains a multiple physician review mechanism which would give you a chance to have a physician of your choice directly participate in the medical surveillance program. If you were dissatisfied with an examination by a physician chosen by your employer, you could select a second physician to conduct an independent analysis. The two doctors would attempt to resolve any differences of opinion, and select a third physician to resolve any firm dispute. Generally your employer will choose the physician who conducts medical surveillance under the lead standard—unless you and your employer can agree on the choice of a physician or physicians. Some companies and unions have agreed in advance, for example, to use certain independent medical laboratories or panels of physicians. Any of these arrangements are acceptable so long as required medical surveillance is made available to workers.

The standard requires your employer to provide certain information to a physician to aid in his or her examination of you. This information includes (1) the standard and its appendices, (2) a description of your duties as they relate to lead exposure, (3) your exposure level, (4) a description of personal protective equipment you wear, (5) prior blood lead level results, and (6) prior written medical opinions concerning you that the employer has. After a medical examination or consultation the physician must prepare a written report which must contain (1) the physician's opinion as to whether you have any medical condition which places you at increased risk of material impairment to health from exposure to lead, (2) any recommended special protective measures to be provided to you, (3) any blood lead level determinations, and (4) any recommended limitation on your use of respirators. This last element must include a determination of whether you can wear a powered air purifying respirator (PAPR) if you are found unable to wear a negative pressure respirator.

The medical surveillance program of the lead standard may at some point in time serve to notify certain workers that they have acquired a disease or other adverse medical condition as a result of occupational lead exposure. If this is true, these workers might have legal rights to compensation from public agencies, their employers, firms that supply hazardous products to their employers, or other persons. Some states have laws, including worker compensation laws, that disallow a worker who learns of a job-related health impairment to sue, unless the worker sues within a short period of time after learning of the impairment. (This period of time may be a matter of months or years.) An attorney can be consulted about these possibilities. It should be stressed that OSHA is in no way trying to either encourage or discourage claims or lawsuits. However, since results of the standard's medical surveillance program can significantly affect the legal remedies of a worker who has acquired a job-related disease or impairment, it is proper for OSHA to make you aware of this.

The medical surveillance section of the standard also contains provisions dealing with chelation. Chelation is the use of certain drugs (administered in pill form or injected into the body) to reduce the amount of lead absorbed in body tissues. Experience accumulated by the medical and scientific communities has largely confirmed the effectiveness of this type of therapy for the treatment of very severe lead poisoning. On the other hand, it has also been established that there can be a long list of extremely harmful side effects associated with the use of chelating agents. The medical community has balanced the advantages and disadvantages resulting from the use of chelating agents in various circumstances and has established when the use of these agents is acceptable. The standard includes these accepted limitations due to a history of abuse of chelation therapy by some lead companies. The most widely used chelating agents are calcium disodium EDTA, ($Ca\ Na_2$ EDTA), Calcium Disodium Versenate (Versenate), and d-penicillamine (pencillamine or Cupramine).

The standard prohibits "prophylactic chelation" of any employee by any person the employer retains, supervises or controls. "Prophylactic chelation" is the routine use of chelating or similarly acting drugs to *prevent* elevated blood levels in workers who are occupationally exposed to lead, or the use of these drugs to *routinely* lower blood lead levels to predesignated concentrations believed to be 'safe'. It should be emphasized that where an employer takes a worker who has no symptoms of lead poisoning and has chelation carried out by a physician (either inside or outside of a hospital) solely to reduce the worker's blood lead level, that will generally be considered prophylactic chelation. The use of a hospital and a physician does not mean that prophylactic chelation is not being performed. Routine chelation to prevent increased or reduce current blood lead levels is unacceptable whatever the setting.

The standard allows the use of "therapeutic" or "diagnostic" chelation if administered under the supervision of a licensed physician in a clinical setting with thorough and appropriate medical monitoring. Therapeutic chelation responds to severe lead poisoning where there are marked symptoms. Diagnostic chelation involved giving a patient a dose of the drug then collecting all urine excreted for some period of time as an aid to the diagnosis of lead poisoning.

In cases where the examining physician determines that chelation is appropriate, you must be notified in writing of this fact before such treatment. This will inform you of a potentially harmful treatment, and allow you to obtain a second opinion.

IX. Medical Removal Protection—paragraph (k)

Excessive lead absorption subjects you to increased risk of disease. Medical removal protection (MRP) is a means of protecting you when, for whatever reasons, other

methods, such as engineering controls, work practices, and respirators, have failed to provide the protection you need. MRP involves the temproary removal of a worker from his or her regular job to a place of significantly lower exposure without any loss of earnings, seniority, or other employment rights or benefits. The purpose of this program is to cease further lead absorption and allow your body to naturally excrete lead which has previously been absorbed. Temporary medical removal can result from an elevated blood lead level, or a medical opinion. Up to 18 months of protection is provided as a result of either form of removal. The vast majority of removed workers, however, will return to their former jobs long before this eighteen month period expires. The standard contains special provisions to deal with the extraordinary but possible case where a longterm worker's blood lead level does not adequately decline during eighteen months of removal.

During the first year of the standard, if your blood lead level is 80 μg/100g or above you must be removed from any exposure where your air lead level without a respirator would be 100 μg/m³ or above. If you are removed from your normal job you may not be returned until your blood lead level declines to at least 60 μg/100g. These criteria for removal and return will change according to the following schedule:

	Removal blood lead (μg/100 g)	Air lead (μg/m³)	Return blood lead (μg/100 g)
After Mar. 1, 1980	70 and above	50 and above	At or below 50.
After Mar. 1, 1981	60 and above	30 and above	At or below 40.
After Mar. 1, 1983	50 and above averaged over six months.	30 and above	Do.

You may also be removed from exposure even if your blood lead levels are below these criteria if a final medical determination indicates that you temporarily need reduced lead exposure for medical reasons. If the physician who is implementing your employers medical program makes a final written opinion recommending your removal or other special protective measures, your employer must implement the physician's recommendation. If you are removed in this manner, you may only be returned when the doctor indicates that it is safe for you to do so.

The standard does not give specific instructions dealing with what an employer must do with a removed worker. Your job assignment upon removal is a matter for you, your employer and your union (if any) to work out consistent with existing procedures for job assignments. Each removal must be accomplished in a manner consistent with existing collective bargaining relationships. Your employer is given broad discretion to implement temporary removals so long as no attempt is made to override existing agreements. Similarly, a removed worker is provided no right to veto an employer's choice which satisfies the standard.

In most cases, employers will likely transfer removed employees to other jobs with sufficiently low lead exposure. Alternatively, a worker's hours may be reduced so that the time weighted average exposure is reduced, or he or she may be temporarily laid off if no other alternative is feasible.

In all of these situation, MRP benefits must be provided during the period of removal—i.e., you continue to receive the same earnings, seniority, and other rights and benefits you would have had if you had not been removed. Earnings includes more than just your base wage; it includes overtime, shift differentials, incentives, and other compensation you would have earned if you had not been removed. During the period of removal you must also be provided with appropriate follow-up medical surveillance. If you were removed because your blood lead level was too high, you must be provided with a monthly blood test. If a medical opinion caused your removal, you must be provided medical tests or examinations that the doctor believes to be appropriate. If you do not participate in this follow up medical surveillance, you may lose your eligibility for MRP benefits.

When you are medically eligible to return to your former job, your employer must return you to your "former job status." This means that you are entitled to the position, wages, benefits, etc., you would have had if you had not been removed. If you would still be in your old job if no removal had occurred that is where you go back. If not, you are returned consistent with whatever job assignment discretion your employer would have had if no removal had occurred. MRP only seeks to maintain your rights, not expand them or diminish them.

If you are removed under MRP and you are also eligible for worker compensation or other compensation for lost wages, your employer's MRP benefits obligation is reduced by the amount that you *actually* receive from these other sources. This is also true if you obtain other employment during the time you are laid off with MRP benefits.

The standard also covers situations where an employer *voluntarily* removes a worker from exposure to lead due to the effects of lead on the employee's medical condition, even though the standard does not require removal. In these situations MRP benefits must still be provided as though the standard required removal. Finally, it is important to note that in all cases where removal is required, respirators cannot be used as a substitute. Respirators may be used before removal becomes necessary, but not as an alternative to a transfer to a low exposure job, or to a lay-off with MRP benefits.

X. Employee Information and Training—paragraph (l)

Your employer is required to provide an information and training program for all employees exposed to lead above the action level or who may suffer skin or eye irritation from lead. This program must inform these employees of the specific hazards associated with their work environment, protective measures which can be taken, the danger of lead to their bodies (including their reproductive systems), and their rights under the standard. In addition your employer must make readily available to all employees, including those exposed below the action level, a copy of the standard and its appendices and must distribute to all employees any materials provided to the employer by the Occupational Safety and Health Administration (OSHA).

Your employer is required to complete this training program for all employees by August 28, 1979. After this date, all new employees must be trained prior to initial assignment to areas where there is a possibility of exposure over the action level.

This training program must also be provided at least annually thereafter.

XI. Signs—paragraph (m)

The standard requires that the following warning sign be posted in work areas where the exposure to lead exceeds the PEL:

WARNING
LEAD WORK AREA
NO SMOKING OR EATING

XII. Recordkeeping—paragraph (n)

Your employer is required to keep all records of exposure monitoring for airborne lead. These records must include the name and job classification of employees measured, details of the sampling and analytic techniques, the results of this sampling, and the type of respiratory protection being worn by the person sampled. Your employer is also required to keep all records of biological monitoring and medical examination results. These must include the names of the employees, the physician's written opinion, and a copy of the results of the examination. All of the above kinds of records must be kept for 40 years, or for at least 20 years after your termination of employment, whichever is longer.

Recordkeeping is also required if you are temporarily removed from your job under the medical removal protection program. This record must include your name and social security number, the date of your removal and return, how the removal was or is being accomplished, and whether or not the reason for the removal was an elevated blood lead level. Your employer is required to keep each

medical removal record only for as long as the duration of an employee's employment.

The standard requires that if you request to see or copy environmental monitoring, blood lead level monitoring, or medical removal records, they must be made available to you or to a representative that you authorize. Your union also has access to these records. Medical records other than PbB's must also be provided upon request to you, to your physician or to any other person whom you may specifically designate. Your union does not have access to your personal medical records unless you authorize their access.

XIII. Observations of Monitoring—paragraph (o)

When air monitoring for lead is performed at your workplace as required by this standard, your employer must allow you or someone you designate to act as an observer of the monitoring. Observers are entitled to an explanation of the measurement procedure, and to record the results obtained. Since results will not normally be available at the time of the monitoring, observers are entitled to record or receive the results of the monitoring when returned by the laboratory. Your employer is required to provide the observer with any personal protective devices required to be worn by employees working in the area that is being monitored. The employer must require the observer to wear all such equipment and to comply with all other applicable safety and health procedures.

XIVv. Effective Date—paragraph (p)

The standard's effective data is March 1, 1979, and employer obligations under the standard begin to come into effect as of that date.

XV. For Additional Information

A. Copies of the Standard and explanatory materials can be obtained free of charge by calling or writing the OSHA Office of Publications, Room S-1212, United States Department of Labor, Washington, D.C. 20210: Telephone (202) 523-6138. The following publications are available:

1. The standard and summary of the statement of reasons (preamble), **Federal Register**, Volume 43, pp. 52952-53014, November 14, 1978.

2. The full statement of reasons (preamble) **Federal Register**, vol. 43, pp. 54354-54509, November 21, 1978.

3. Partial Administrative Stay and Corrections to the standard, (44 FR 5446-5448) January 26, 1979.

4. Notice of the Partial Judicial Stay (44 FR 14554-14555) March 13, 1979.

5. Corrections to the preamble, **Federal Register**, vol. 44, pp. 20680-20681, April 6, 1979.

6. Additional correction to the preamble concerning the construction industry, **Federal Register**, vol. 44, p. 50338, August 28, 1979.

7. Appendices to the standard (Appendices A, B, C), **Federal Register**, Vol. 44, pp. 60980-60995, October 23, 1979.

8. Corrections to appendices, **Federal Register**, Vol. 44, 68828, November 30, 1979.

9. Revision to the standard and additional appendices (Appendices D and E), **Federal Register**, Vol. 47, pp. 51117-51119, November 12, 1982.

B. Additional information about the standard, its enforcement, and your employer's compliance can be obtained from the nearest OSHA Area Office listed in your telephone directory under United States Government/Department of Labor.

Appendix C to § 1915.1025—Medical Surveillance Guidelines

Introduction

The primary purpose of the Occupational Safety and Health Act of 1970 is to assure, so far as possible, safe and healthful working conditions for every working man and woman. The occupational health standard for inorganic lead[1] was promulgated to protect workers exposed to inorganic lead including metallic lead, all inorganic lead compounds and organic lead soaps.

Under this final standard in effect as of March 1, 1979, occupational exposure to inorganic lead is to be limited to 50 μg/m³ (micrograms per cubic meter) based on an 8 hour time-weighted average (TWA). This level of exposure eventually must be achieved through a combination of engineering, work practice and other administrative controls. Periods of time ranging from 1 to 10 years are provided for different industries to implement these controls. The schedule which is based on individual industry considerations is given in Table 1. Until these controls are in place, respirators must be used to meet the 50 μg/m³ exposure limit.

The standard also provides for a program of biological monitoring and medical surveillance for all employees exposed to levels of inorganic lead above the action level of 30 μg/m³ (TWA) for more than 30 days per year.

The purpose of this document is to outline the medical surveillance provisions of the standard for inorganic lead, and to provide further information to the physician regarding the examination and evaluation of workers exposed to inorganic lead.

Section 1 provides a detailed description of the monitoring procedure including the required frequency of blood testing for exposed workers, provisions for medical removal protection (MRP), the recommended right of the employee to a second medical opinion, and notification and recordkeeping requirements of the employer. A discussion of the requirements for respirator use and respirator monitoring and OSHA's position on prophylactic chelation therapy are also included in this section.

Section 2 discusses the toxic effects and clinical manifestations of lead poisoning and effects of lead intoxication on enzymatic pathways in heme synthesis. The adverse effects on both male and female reproductive capacity and on the fetus are also discussed.

Section 3 outlines the recommended medical evaluation of the worker exposed to inorganic lead including details of the medical history, physical examination, and recommended laboratory tests, which are based on the toxic effects of lead as discussed in Section 2.

Section 4 provides detailed information concerning the laboratory tests available for the monitoring of exposed workers. Included also is a discussion of the relative value of each test and the limitations and precautions which are necessary in the interpretation of the laboratory results.

TABLE 1

Permissible airborne lead levels by industry (μg/m³)[1]	Effective date					
	Mar. 1, 1979	Mar. 1, 1980	Mar. 1, 1981	Mar. 1, 1982	Mar. 1, 1984	Mar. 1, 1989 (final)
1. Primary lead production	200	200	200	100	100	50
2. Secondary lead production	200	200	200	100	50	50
3. Lead-acid battery manufacturing	200	200	100	100	50	50
4. Nonferrous foundries	200	100	100	100	50	50
5. Lead pigment manufacturing	200	200	200	100	50	50
6. All other industries	200	50	50	50	50	50

[1] Airborne levels to be achieved without reliance or respirator protection through a combination of engineering, work practice and other administrative controls. While these controls are being implemented respirators must be used to meet the 50 μg/m³ exposure limit.

[1] The term inorganic lead used throughout the medical surveillance appendices is meant to be synonymous with the definition of lead set forth in the standard.

I. Medical Surveillance and Monitoring Requirements for Workers Exposed to Inorganic Lead

Under the occupational health standard for inorganic lead, a program of biological monitoring and medical surveillance is to be made available to all employees exposed to lead above the action level of 30 μg/m³ TWA for more than 30 days each year. This program consists of periodic blood sampling and medical evaluation to be performed on a schedule which is defined by previous laboratory results, worker complaints or concerns, and the clinical assessment of the examining physician.

Under this program, the blood lead level of all employees who are exposed to lead above the action level of 30 μg/m³ is to be determined at least every six months. The frequency is increased to every two months for employees whose last blood lead level was between 40 μg/100 g whole blood and the level requiring employee medical removal to be discussed below. For employees who are removed from exposure to lead due to an elevated blood lead, a new blood lead level must be measured monthly. A zinc protoporphyrin (ZPP) measurement is strongly recommended on each occasion that a blood lead level measurement is made.

An annual medical examination and consultation performed under the guidelines discussed in Section 3 is to be made available to each employee for whom a blood test conducted at any time during the preceding 12 months indicated a blood lead level at or above 40 μg/100 g. Also, an examination is to be given to all employees prior to their assignment to an area in which airborne lead concentrations reach or exceed the action level. In addition, a medical examination must be provided as soon as possible after notification by an employee that the employee has developed signs or symptoms commonly associated with lead intoxication, that the employee desires medical advice regarding lead exposure and the ability to procreate a healthy child, or that the employee has demonstrated difficulty in breathing during a respirator fitting test or during respirator use. An examination is also to be made available to each employee removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise limited or specially protected pursuant to medical recommendations.

Results of biological monitoring or the recommendations of an examining physician may necessitate removal of an employee from further lead exposure pursuant to the standard's medical removal protection (MRP) program. The object of the MRP program is to provide temporary medical removal to workers either with substantially elevated blood lead levels or otherwise at risk of sustaining material health impairment from continued substantial exposure to lead. The following guidelines which are summarized in Table 2 were created under the standard for the temporary removal of an exposed employee and his or her subsequent return to work in an exposure area.

TABLE 2

	Effective date				
	Mar. 1, 1979	Mar. 1, 1980	Mar. 1, 1981	Mar. 1, 1982	Mar. 1, 1983 (final)
A. Blood lead level requiring employee medical removal. (Level must be confirmed with second follow-up blood lead level within two weeks of first report.).	≥80 μg/100 g.	≥70μg/100 g	≥60 μg/100 g.	≥60 μg/100 g.	≥60μg/100 g or average of last three blood samples or all blood samples over previous 6 months (whichever is over a longer time period) is 50 μg/100 g or greater unless last blood sample is 40 μg/100 g or less.
B. Frequency which employees exposed to action level of lead (30 μg/m³ TWA) must have blood lead level checked (ZPP is also strongly recommended in each occasion that a blood lead is obtained.):					
1. Last blood lead level less than 40 μg/100 g.	Every 6 months.	Every 6 months.	Every 6 months.	Every 6 months.	Every 6 months.
2. Last blood lead level between 40 μg/100 g and level requiring medical removal (see A above).	Every 2 months.	Every 2 months.	Every 2 months.	Every 2 months.	Every 2 months.
3. Employees removed from exposure to lead because of an elevated blood lead level.	Every 1 month.	Every 1 month.	Every 1 month.	Every 1 month.	Every 1 month.
C. Permissible airborne exposure limit for workers removed from work due to an elevated blood lead level (without regard to respirator protection).	100 μg/m³ 8 hr TWA.	50 μg/m³ 8 hr TWA.	30 μg/m³ 8 hr TWA.	30 μg/m³ 8 hr TWA.	30 μg/m³ 8 hr TWA.
D. Blood lead level confirmed with a second blood analysis, at which employee may return to work. Permissible exposure without regard to respirator protection is listed by industry in Table I.	<60 μg/100 g.	<50 μg/100 g.	<40 μg/100 g.	<40 μg/100 g.	<40 μg/100 g.

NOTE: When medical opinion indicates that an employee is at risk of material impairment from exposure to lead, the physician can remove an employee from exposures exceeding the action level (or less) or recommend special protective measures as deemed appropriate and necessary. Medical monitoring during the medical removal period can be more stringent than noted in the table above if the physician so specifies. Return to work or removal of limitations and special protections is permitted when the physician indicates that the worker is no longer at risk of material impairment.

Under the standard's ultimate worker removal criteria, a worker is to be removed from any work having any eight hour TWA exposure to lead of 30 μg/m³ or more whenever either of the following circumstances apply: (1) a blood lead level of 60 μg/100 g or greater is obtained and confirmed by a second follow-up blood lead level performed within two weeks after the employer receives the results of the first blood sampling test, or (2) the average of the previous three blood lead determinations or the average of all blood lead determinations conducted during the previous six months, whichever encompasses the longest time period, equals or exceeds 50 μg/100 g, unless the last blood sample indicates a blood lead level at or below 40 μg/100 g in which case the employee need not be removed. Medical removal is to continue until two consecutive blood lead levels are 40 μg/100 g or less.

During the first two years that the ultimate removal criteria are being phased in, the return criteria have been set to assure that a worker's blood lead level has substantially declined during the period of removal. From March 1, 1979 to March 1, 1980, the blood lead level requiring employee medical removal is 80 μg/100 g. Workers found to have a confirmed blood lead at this level or greater need only be removed from work having a daily 8 hour TWA exposure to lead at or above 100 μg/m³. Workers so removed are to be returned to work when their blood lead levels are at or below 60 μg/100 g of whole blood. From March 1, 1980 to March 1, 1981, the blood lead level requiring medical removal is 70 μg/100 g. During this period workers need only be removed from jobs having a daily 8 hour TWA exposure to lead at or above 50 μg/m³ and are to be returned to work when a level of 50 μg/100 g is achieved. Beginning March 1, 1981, return depends on a worker's blood lead level declining to 40 μg/100 g of whole blood.

As part of the standard, the employer is required to notify in writing each employee whose blood lead level exceeds 40 μg/100 g. In addition each such employee is to be informed that the standard requires medical removal with MRP benefits, discussed below, when an employee's blood lead level exceeds the above defined limits.

In addition to the above blood lead level criteria, temporary worker removal may also take place as a result of medical determinations and recommendations. Written medical opinions must be prepared after each examination pursuant to the standard. If the examining physician includes a medical finding, determination or opinion that the employee has a medical condition which places the employee at increased risk of material health impairment from exposure to lead, then the employee must be removed from exposure to lead at or above the action level. Alternatively, if the examining physician recommends special protective measures for an employee (e.g., use of a powered air purifying respirator) or recommends limitations on an employee's exposure to lead, then the employer must implement these recommendations. Recommendations may be more stringent than the specific provisions of the standard. The examining physician, therefore, is given broad flexibility to tailor special protective procedures to the needs of individual employees. This flexibility extends to the evaluation and management of pregnant workers and male and female workers who are planning to raise children. Based on the history, physical examination, and laboratory studies, the physician might recommend special protective measures or medical removal for an employee who is pregnant or who is planning to conceive a child when, in the physician's judgment, continued exposure to lead at the current job would pose a significant risk. The return of the employee to his or her former job status, or the removal of special protections or limitations, depends upon the examining physician determining that the employee is no longer at increased risk of material impairment or that special measures are no longer needed.

During the period of any form of special protection or removal, the employer must maintain the worker's earnings, seniority, and other employment rights and benefits (as though the worker had not been removed) for a period of up to 18 months. This economic protection will maximize meaningful worker participation in the medical surveillance program, and is appropriate as part of the employer's overall obligation to provide a safe and healthful workplace. The provisions of MRP benefits during the employee's removal period may, however, be conditioned upon participation in medical surveillance.

On rare occasions, an employee's blood lead level may not acceptably decline within 18 months of removal. This situation will arise only in unusual circumstances, thus the standard relies on an individual medical examination to determine how to protect such an employee. This medical determination is to be based on both laboratory values, including lead levels, zinc protoporphyrin levels, blood counts, and other tests felt to be warranted, as well as the physician's judgment that any symptoms or findings on physical examination are a result of lead toxicity. The medical determination may be that the employee is incapable of ever safely returning to his or her former job status. The medical determination may provide additional removal time past 18 months for some employees or specify special protective measures to be implemented.

The lead standard provides for a multiple physician review in cases where the employee wishes a second opinion concerning potential lead poisoning or toxicity. If an employee wishes a second opinion, he or she can make an appointment with a physician of his or her choice. This second physician will review the findings, recommendations or determinations of the first physician and conduct any examinations, consultations or tests deemed necessary in an attempt to make a final medical determination. If the first and second physicians do not agree in their assessment they must try to resolve their differences. If they cannot reach an agreement then they must designate a third physician to resolve the dispute.

The employer must provide examining and consulting physicians with the following specific information: a copy of the lead regulations and all appendices, a description of the employee's duties as related to exposure, the exposure level to lead and any other toxic substances (if applicable), a description of personal protective equipment used, blood lead levels, and all prior written medical opinions regarding the employee in the employer's possession or control. The employer must also obtain from the physician and provide the employee with a written medical opinion containing blood lead levels, the physicians's opinion as to whether the employee is at risk of material impairment to health, any recommended protective measures for the employee if further exposure is permitted, as well as any recommended limitations upon an employee's use of respirators.

Employers must instruct each physician not to reveal to the employer in writing or in any other way his or her findings, laboratory results, or diagnoses which are felt to be unrelated to occupational lead exposure. They must also instruct each physician to advise the employee of any occupationally or non-occupationally related medical condition requiring further treatment or evaluation.

The standard provides for the use of respirators where engineering and other primary controls have not been fully implemented. However, the use of respirator protection shall not be used in lieu of temporary medical removal due to elevated blood lead levels or findings that an employee is at risk of material health impairment. This is based on the numerous inadequacies of respirators including skin rash where the facepiece makes contact with the skin, unacceptable stress to breathing in some workers with underlying cardiopulmonary impairment, difficulty in providing adequate fit, the tendency for respirators to create additional hazards by interfering with vision, hearing, and mobility, and the difficulties of assuring the maximum effectiveness of a complicated work practice program involving respirators. Respirators do, however, serve a useful function where engineering and work practice controls are inadequate by providing supplementary, interim, or short-term protection, provided they are properly selected for the environment in which the employee will be working, properly fitted to the employee, maintained and cleaned periodically, and worn by the employee when required.

In its final standard on occupational exposure to inorganic lead, OSHA has prohibited prophylactic chelation. Diagnostic and therapeutic chelation are permitted only under the supervision of a licensed physician with appropriate medical monitoring in an acceptable clinical setting. The decision to initiate chelation therapy must be made on an individual basis and take into account the severity of symptoms felt to be a result of lead toxicity along with blood lead levels, ZPP levels, and other laboratory tests as appropriate. EDTA and penicillamine which are the primary chelating agents used in the therapy of occupational lead poisoning have significant potential side effects and their use must be justified on the basis of expected benefits to the worker. Unless frank and severe symptoms are present, therapeutic chelation is not recommended given the opportunity to remove a worker from exposure and allow the body to naturally excrete accumulated lead. As a diagnostic aid, the chelation mobilization test using CA–EDTA has limited applicability. According to some investigators, the test can differentiate between lead-induced and other nephropathies. The test may also provide an estimation of the mobile fraction of the total body lead burden.

Employers are required to assure that accurate records are maintained on exposure monitoring, medical surveillance, and medical removal for each employee. Exposure monitoring and medical surveillance records must be kept for 40 years or the duration of employment plus 20 years, whichever is longer, while medical

removal records must be maintained for the duration of employment. All records required under the standard must be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health and the Director of the National Institute for Occupational Safety and Health. Employers must also make environmental and biological monitoring and medical removal records available to affected employees and to former employees or their authorized employee representatives. Employees or their specifically designated representatives have access to their entire medical surveillance records.

In addition, the standard requires that the employer inform all workers exposed to lead at or above the action level of the provisions of the standard and all its appendices, the purpose and description of medical surveillance and provisions for medical removal protection if temporary removal is required. An understanding of the potential health effects of lead exposure by all exposed employees along with full understanding of their rights under the lead standard is essential for an effective monitoring program.

II. Adverse Health Effects of Inorganic Lead

Although the toxicity of lead has been known for 2,000 years, the knowledge of the complex relationship between lead exposure and human response is still being refined. Significant research into the toxic properties of lead continues throughout the world, and it should be anticipated that our understanding of thresholds of effects and margins of safety will be improved in future years. The provisions of the lead standard are founded on two prime medical judgments: first, the prevention of adverse health effects from exposure to lead throughout a working lifetime requires that worker blood lead levels be maintained at or below 40 µg/100 g and second, the blood lead levels of workers, male or female, who intend to parent in the near future should be maintained below 30 µg/100 g to minimize adverse reproductive health effects to the parents and developing fetus. The adverse effects of lead on reproduction are being actively researched and OSHA encourages the physician to remain abreast of recent developments in the area to best advise pregnant workers or workers planning to conceive children.

The spectrum of health effects caused by lead exposure can be subdivided into five developmental stages: normal, physiological changes of uncertain significance, pathophysiological changes, overt symptoms (morbidity), and mortality. Within this process there are no sharp distinctions, but rather a continuum of effects. Boundaries between categories overlap due to the wide variation of individual responses and exposures in the working population. OSHA's development of the lead standard focused on pathophysiological changes as well as later stages of disease.

1. *Heme Synthesis Inhibition.* The earliest demonstrated effect of lead involves its ability to inhibit at least two enzymes of the heme synthesis pathway at very low blood levels. Inhibition of delta aminolevulinic acid dehydrase (ALA–D) which catalyzes the conversion of delta-aminolevulinic acid (ALA) to protoporphyrin is observed at a blood lead level below 20 µg/100 g whole blood. At a blood lead level of 40 ug/100 g, more than 20% of the population would have 70% inhibition of ALA–D. There is an exponential increase in ALA excretion at blood lead levels greater than 40 µg/100 g.

Another enzyme, ferrochelatase, is also inhibited at low blood lead levels. Inhibition of ferrochelatase leads to increased free erythrocyte protoporphyrin (FEP) in the blood which can then bind to zinc to yield zinc protoporphyrin. At a blood lead level of 50 µg/100 g or greater, nearly 100% of the population will have an increase in FEP. There is also an exponential relationship between blood lead levels greater than 40 µg/100 g and the associated ZPP level, which has led to the development of the ZPP screening test for lead exposure.

While the significance of these effects is subject to debate, it is OSHA's position that these enzyme disturbances are early stages of a disease process which may eventually result in the clinical symptoms of lead poisoning. Whether or not the effects do progress to the later stages of clinical disease, disruption of these enzyme processes over a working lifetime is considered to be a material impairment of health.

One of the eventual results of lead-induced inhibition of enzymes in the heme synthesis pathway is anemia which can be asymptomatic if mild but associated with a wide array of symptoms including dizziness, fatigue, and tachycardia when more severe. Studies have indicated that lead levels as low as 50 µg/100 g can be associated with a definite decreased hemoglobin, although most cases of lead-induced anemia, as well as shortened red-cell survival times, occur at lead levels exceeding 80 µg/100 g. Inhibited hemoglobin synthesis is more common in chronic cases whereas shortened erythrocyte life span is more common in acute cases.

In lead-induced anemias, there is usually a reticulocytosis along with the presence of basophilic stippling, and ringed sideroblasts, although none of the above are pathognomonic for lead-induced anemia.

2. *Neurological Effects.* Inorganic lead has been found to have toxic effects on both the central and peripheral nervous systems. The earliest stages of lead-induced central nervous system effects first manifest themselves in the form of behavioral disturbances and central nervous system symptoms including irritability, restlessness, insomnia and other sleep disturbances, fatigue, vertigo, headache, poor memory, tremor, depression, and apathy. With more severe exposure, symptoms can progress to drowsiness, stupor, hallucinations, delerium, convulsions and coma.

The most severe and acute form of lead poisoning which usually follows ingestion or inhalation of large amounts of lead is acute encephalopathy which may arise precipitously with the onset of intractable seizures, coma, cardiorespiratory arrest, and death within 48 hours.

While there is disagreement about what exposure levels are needed to produce the earliest symptoms, most experts agree that symptoms definitely can occur at blood lead levels of 60 µg/100 g whole blood and therefore recommend a 40 µg/100 g maximum. The central nervous system effects frequently are not reversible following discontinued exposure or chelation therapy and when improvement does occur, it is almost always only partial.

The peripheral neuropathy resulting from lead exposure characteristically involves only motor function with minimal sensory damage and has a marked predilection for the extensor muscles of the most active extremity. The peripheral neuropathy can occur with varying degrees of severity. The earliest and mildest form which can be detected in workers with blood lead levels as low as 50 µg/100 g is manifested by slowing of motor nerve conduction velocity often without clinical symptoms. With progression of the neuropathy there is development of painless extensor muscle weakness usually involving the extensor muscles of the fingers and hand in the most active upper extremity, followed in severe cases by wrist drop or, much less commonly, foot drop.

In addition to slowing of nerve conduction, electromyographical studies in patients with blood lead levels greater than 50 µg/100 g have demonstrated a decrease in the number of acting motor unit potentials, an increase in the duration of motor unit potentials, and spontaneous pathological activity including fibrillations and fasciculations. Whether these effects occur at levels of 40 µg/100 g is undetermined.

While the peripheral neuropathies can occasionally be reversed with therapy, again such recovery is not assured particularly in the more severe neuropathies and often improvement is only partial. The lack of reversibility is felt to be due in part to segmental demyelination.

3. *Gastrointestinal.* Lead may also affect the gastrointestinal system producing abdominal colic or diffuse abdominal pain, constipation, obstipation, diarrhea, anorexia, nausea and vomiting. Lead colic rarely develops at blood lead levels below 80 µg/100 g.

4. *Renal.* Renal toxicity represents one of the most serious health effects of lead poisoning. In the early stages of disease nuclear inclusion bodies can frequently be identified in proximal renal tubular cells. Renal function remains normal and the changes in this stage are probably reversible. With more advanced disease there is progressive interstitial fibrosis and impaired renal function. Eventually extensive interstitial fibrosis ensues with sclerotic glomeruli and dilated and atrophied proximal tubules; all represent end stage kidney disease. Azotemia can be progressive, eventually resulting in frank uremia necessitating dialysis. There is occasionally associated hypertension and hyperuricemia with or without gout.

Early kidney disease is difficult to detect. The urinalysis is normal in early lead nephropathy and the blood urea nitrogen and serum creatinine increase only when two-thirds of kidney function is lost. Measurement of creatinine clearance can often detect earlier disease as can other methods of measurement of glomerular filtration rate. An abnormal Ca-EDTA

mobilization test has been used to differentiate between lead-induced and other nephropathies, but this procedure is not widely accepted. A form of Fanconi syndrome with aminoaciduria, glycosuria, and hyperphosphaturia indicating severe injury to the proximal renal tubules is occasionally seen in children.

5. *Reproductive effects.* Exposure to lead can have serious effects on reproductive function in both males and females. In male workers exposed to lead there can be a decrease in sexual drive, impotence, decreased ability to produce healthy sperm, and sterility. Malformed sperm (teratospermia), decreased number of sperm (hypospermia), and sperm with decreased motility (asthenospermia) can all occur. Teratospermia has been noted at mean blood lead levels of 53 µg/100 g and hypospermia and asthenospermia at 41 µg/100 g. Furthermore, there appears to be a dose-response relationship for teratospermia in lead exposed workers.

Women exposed to lead may experience menstrual disturbances including dysmenorrhea, menorrhagia and amenorrhea. Following exposure to lead, women have a higher frequency of sterility, premature births, spontaneous miscarriages, and stillbirths.

Germ cells can be affected by lead and cause genetic damage in the egg or sperm cells before conception and result in failure to implant, miscarriage, stillbirth, or birth defects.

Infants of mothers with lead poisoning have a higher mortality during the first year and suffer from lowered birth weights, slower growth, and nervous system disorders.

Lead can pass through the placental barrier and lead levels in the mother's blood are comparable to concentrations of lead in the umbilical cord at birth. Transplacental passage becomes detectable at 12–14 weeks of gestation and increases until birth.

There is little direct data on damage to the fetus from exposure to lead but it is generally assumed that the fetus and newborn would be at least as susceptible to neurological damage as young children. Blood lead levels of 50–60 µg/100 g in children can cause significant neurobehavioral impairments and there is evidence of hyperactivity at blood levels as low as 25 µg/100 g. Given the overall body of literature concerning the adverse health effects of lead in children, OSHA feels that the blood lead level in children should be maintained below 30 µg/100 g with a population mean of 15 µg/100 g. Blood lead levels in the fetus and newborn likewise should not exceed 30 µg/100 g.

Because of lead's ability to pass through the placental barrier and also because of the demonstrated adverse effects of lead on reproductive function in both the male and female as well as the risk of genetic damage of lead on both the ovum and sperm, OSHA recommends a 30 µg/100 g maximum permissible blood lead level in both males and females who wish to bear children.

6. *Other toxic effects.* Debate and research continue on the effects of lead on the human body. Hypertension has frequently been noted in occupationally exposed individuals although it is difficult to assess whether this is due to lead's adverse effects on the kidney or if some other mechanism is involved. Vascular and electrocardiogarphic changes have been detected but have not been well characterized. Lead is thought to impair thyroid function and interfere with the pituitary-adrenal axis, but again these effects have not been well defined.

III. Medical Evaluation

The most important principle in evaluating a worker for any occupational disease including lead poisoning is a high index of suspicion on the part of the examining physician. As discussed in Section 2, lead can affect numerous organ systems and produce a wide array of signs and symptoms, most of which are non-specific and subtle in nature at least in the early stages of disease. Unless serious concern for lead toxicity is present, many of the early clues to diagnosis may easily be overlooked.

The crucial initial step in the medical evaluation is recognizing that a worker's employment can result in exposure to lead. The worker will frequently be able to define exposures to lead and lead containing materials but often will not volunteer this information unless specifically asked. In other situations the worker may not know of any exposures to lead but the suspicion might be raised on the part of the physician because of the industry or occupation of the worker. Potential occupational exposure to lead and its compounds occur in at least 120 occupations, including lead smelting, the manufacture of lead storage batteries, the manufacture of lead pigments and products containing pigments, solder manufacture, shipbuilding and ship repair, auto manufacturing, construction, and painting.

Once the possibility for lead exposure is raised, the focus can then be directed toward eliciting information from the medical history, physical exam, and finally from laboratory data to evaluate the worker for potential lead toxicity.

A complete and detailed work history is important in the initial evaluation. A listing of all previous employment with information on work processes, exposure to fumes or dust, known exposures to lead or other toxic substances, respiratory protection used, and previous medical surveillance should all be included in the worker's record. Where exposure to lead is suspected, information concerning on-the-job personal hygiene, smoking or eating habits in work areas, laundry procedures, and use of any protective clothing or respiratory protection equipment should be noted. A complete work history is essential in the medical evaluation of a worker with suspected lead toxicity, especially when long term effects such as neurotoxicity and nephrotoxicity are considered.

The medical history is also of fundamental importance and should include a listing of all past and current medical conditions, current medications including proprietary drug intake, previous surgeries and hospitalizations, allergies, smoking history, alcohol consumption, and also non-occupational lead exposures such as hobbies (hunting, riflery). Also known childhood exposures should be elicited. Any previous history of hematological, neurological, gastrointestinal, renal, psychological, gynecological, genetic, or reproductive problems should be specifically noted.

A careful and complete review of systems must be performed to assess both recognized complaints and subtle or slowly acquired symptoms which the worker might not appreciate as being significant. The review of symptoms should include the following:

General—weight loss, fatigue, decreased appetite.

Head, Eyes, Ears, Nose, Throat (HEENT)—headaches, visual disturbances or decreased visual acuity, hearing deficits or tinnitus, pigmentation of the oral mucosa, or metallic taste in mouth.

Cardio-pulmonary—shortness of breath, cough, chest pains, palpitations, or orthopnea.

Gastrointestinal—nausea, vomiting, heartburn, abdominal pain, constipation or diarrhea.

Neurologic—irritability, insomnia, weakness (fatigue), dizziness, loss of memory, confusion, hallucinations, incoordination, ataxia, decreased strength in hands or feet, disturbances in gait, difficulty in climbing stairs, or seizures.

Hematologic—pallor, easy fatigability, abnormal blood loss, melena.

Reproductive (male and female and spouse where relevant)—history of infertility, impotence, loss of libido, abnormal menstrual periods, history of miscarriages, stillbirths, or children with birth defects.

Musculo-skeletal—muscle and joint pains.

The physical examination should emphasize the neurological, gastrointestinal, and cardiovascular systems. The worker's weight and blood pressure should be recorded and the oral mucosa checked for pigmentation characteristic of a possible Burtonian or lead line on the gingiva. It should be noted, however, that the lead line may not be present even in severe lead poisoning if good oral hygiene is practiced.

The presence of pallor on skin examination may indicate an anemia, which if severe might also be associated with a tachycardia. If an anemia is suspected, an active search for blood loss should be undertaken including potential blood loss through the gastrointestinal tract.

A complete neurological examination should include an adequate mental status evaluation including a search for behavioral and psychological disturbances, memory testing, evaluation for irritability, insomnia, hallucinations, and mental clouding. Gait and coordination should be examined along with close observation for tremor. A detailed evaluation of peripheral nerve function including careful sensory and motor function testing is warranted. Strength testing particularly of extensor muscle groups of all extremities is of fundamental importance.

Cranial nerve evaluation should also be included in the routine examination.

The abdominal examination should include auscultation for bowel sounds and abdominal bruits and palpation for organomegaly, masses, and diffuse abdominal tenderness.

Cardiovascular examination should evaluate possible early signs of congestive

heart failure. Pulmonary status should be addressed particularly if respirator protection is contemplated.

As part of the medical evaluation, the lead standard requires the following laboratory studies:

1. Blood lead level
2. Hemoglobin and hematocrit determinations, red cell indices, and examination of the peripheral blood smear to evaluate red blood cell morphology
3. Blood urea nitrogen
4. Serum creatinine
5. Routine urinalysis with microscopic examination.
6. A zinc protoporphyrin level

In addition to the above, the physician is authorized to order any further laboratory or other tests which he or she deems necessary in accordance with sound medical practice. The evaluation must also include pregnancy testing or laboratory evaluation of male fertility if requested by the employee.

Additional tests which are probably not warranted on a routine basis but may be appropriate when blood lead and ZPP levels are equivocal include delta aminolevulinic acid and coproporphyrin concentrations in the urine, and dark-field illumination for detection of basophilic stippling in red blood cells.

If an anemia is detected further studies including a careful examination of the peripheral smear, reticulocyte count, stool for occult blood, serum iron, total iron binding capacity, bilirubin, and, if appropriate, vitamin B12 and folate may be of value in attempting to identify the cause of the anemia.

If a peripheral neuropathy is suspected, nerve conduction studies are warranted both for diagnosis and as a basis to monitor any therapy.

If renal disease is questioned, a 24 hour urine collection for creatinine clearance, protein, and electrolytes may be indicated. Elevated uric acid levels may result from lead-induced renal disease and a serum uric acid level might be performed.

An electrocardiogram and chest x-ray may be obtained as deemed appropriate.

Sophisticated and highly specialized testing should not be done routinely and where indicated should be under the direction of a specialist.

IV. Laboratory Evaluation

The blood lead level at present remains the single most important test to monitor lead exposure and is the test used in the medical surveillance program under the lead standard to guide employee medical removal. The ZPP has several advantages over the blood lead level. Because of its relatively recent development and the lack of extensive data concerning its interpretation, the ZPP currently remains an ancillary test.

This section will discuss the blood lead level and ZPP in detail and will outline their relative advantages and disadvantages. Other blood tests currently available to evaluate lead exposure will also be reviewed.

The blood lead level is a good index of current or recent lead absorption when there is no anemia present and when the worker has not taken any chelating agents. However, blood lead levels along with urinary lead levels do not necessarily indicate the total body burden of lead and are not adequate measures of past exposure. One reason for this is that lead has a high affinity for bone and up to 90% of the body's total lead is deposited there. A very important component of the total lead body burden is lead in soft tissue (liver, kidney, and brain). This fraction of the lead body burden, the biologically active lead, is not entirely reflected by blood lead levels since it is a function of the dynamics of lead absorption, distribution, deposition in bone and excretion. Following discontinuation of exposure to lead, the excess body burden is only slowly mobilized from bone and other relatively stable body stores and excreted. Consequently, a high blood lead level may only represent recent heavy exposure to lead without a significant total body excess and likewise a low blood lead level does not exclude an elevated total body burden of lead.

Also due to its correlation with recent exposures, the blood lead level may vary considerably over short time intervals.

To minimize laboratory error and erroneous results due to contamination, blood specimens must be carefully collected after thorough cleaning of the skin with appropriate methods using lead-free blood containers and analyzed by a reliable laboratory. Under the standard, samples must be analyzed in laboratories which are approved by the Center for Disease Control (CDC) or which have received satisfactory grades in proficiency testing by the CDC in the previous year. Analysis is to be made using atomic absorption spectrophotometry, anodic stripping voltammetry or any method which meets the accuracy requirements set forth by the standard.

The determination of lead in urine is generally considered a less reliable monitoring technique than analysis of whole blood primarily due to individual variability in urinary excretion capacity as well as the technical difficulty of obtaining accurate 24 hour urine collections. In addition, workers with renal insufficiency, whether due to lead or some other cause, may have decreased lead clearance and consequently urine lead levels may underestimate the true lead burden. Therefore, urine lead levels should not be used as a routine test.

The zinc protoporphyrin test, unlike the blood lead determination, measures an adverse metabolic effect of lead and as such is a better indicator of lead toxicity than the level of blood lead itself. The level of ZPP reflects lead absorption over the preceding 3 to 4 months, and therefore is a better indicator of lead body burden. The ZPP requires more time than the blood lead to read significantly elevated levels; the return to normal after discontinuing lead exposure is also slower. Furthermore, the ZPP test is simpler, faster, and less expensive to perform and no contamination is possible. Many investigators believe it is the most reliable means of monitoring chronic lead absorption.

Zinc protoporphyrin results from the inhibition of the enzyme ferrochelatase which catalyzes the insertion of an iron molecule into the protoporphyrin molecule, which then becomes heme. If iron is not inserted into the molecule then zinc, having a greater affinity for protoporphyrin, takes the place of the iron, forming ZPP.

An elevation in the level of circulating ZPP may occur at blood lead levels as low as 20–30 μg/100 g in some workers. Once the blood lead level has reached 40 μg/100 g there is more marked rise in the ZPP value from its normal range of less than 100 μg/100 ml. Increases in blood lead levels beyond 40 μg/100 g are associated with exponential increases in ZPP.

Whereas blood lead levels fluctuate over short time spans, ZPP levels remain relatively stable. ZPP is measured directly in red blood cells and is present for the cell's entire 120 day life-span. Therefore, the ZPP level in blood reflects the average ZPP production over the previous 3–4 months and consequently the average lead exposure during that time interval.

It is recommended that a hematocrit be determined whenever a confirmed ZPP of 50 μg/100 ml whole blood is obtained to rule out a significant underlying anemia. If the ZPP is in excess of 100 μg/100 ml and not associated with abnormal elevations in blood lead levels, the laboratory should be checked to be sure that blood leads were determined using atomic absorption spectrophotometry anodic stripping voltammetry, or any method which meets the accuracy requirements set forth by the standard by a CDC approved laboratory which is experienced in lead level determinations. Repeat periodic blood lead studies should be obtained in all individuals with elevated ZPP levels to be certain that an associated elevated blood lead level has not been missed due to transient fluctuations in blood leads.

ZPP has a characteristic fluorescence spectrum with a peak at 594 nm which is detectable with a hematofluorimeter. The hematofluorimeter is accurate and portable and can provide on-site, instantaneous results for workers who can be frequently tested via a finger prick.

However, careful attention must be given to calibration and quality control procedures. Limited data on blood lead—ZPP correlations and the ZPP levels which are associated with the adverse health effects discussed in Section 2 are the major limitations of the test. Also it is difficult to correlate ZPP levels with environmental exposure and there is some variation of response with age and sex. Nevertheless, the ZPP promises to be an important diagnostic test for the early detection of lead toxicity and its value will increase as more data is collected regarding its relationship to other manifestations of lead poisoning.

Levels of delta-aminolevulinic acid (ALA) in the urine are also used as a measure of lead exposure. Increasing concentrations of ALA are believed to result from the inhibition of the enzyme delta-aminolevulinic acid dehydrase (ALA–D). Although the test is relatively easy to perform, inexpensive, and rapid, the disadvantages include variability in results, the necessity to collect a complete 24 hour urine sample which has a specific gravity greater than 1.010, and also the fact that ALA decomposes in the presence of light.

The pattern of porphyrin excretion in the urine can also be helpful in identifying lead

intoxication. With lead poisoning, the urine concentrations of coproporphyrins I and II, porphobilinogen and uroporphyrin I rise. The most important increase, however, is that of coproporphyrin III; levels may exceed 5,000 µg/l in the urine in lead poisoned individuals, but its correlation with blood lead levels and ZPP are not as good as those of ALA. Increases in urinary porphyrins are not diagnostic of lead toxicity and may be seen in porphyria, some liver diseases, and in patients with high reticulocyte counts.

Summary. The Occupational Safety and Health Administration's standard for inorganic lead places significant emphasis on the medical surveillance of all workers exposed to levels of inorganic lead above the action level of 30 µg/m³ TWA. The physician has a fundamental role in this surveillance program, and in the operation of the medical removal protection program.

Even with adequate worker education on the adverse health effects of lead and appropriate training in work practices, personal hygiene and other control measures, the physician has a primary responsibility for evaluating potential lead toxicity in the worker. It is only through a careful and detailed medical and work history, a complete physical examination and appropriate laboratory testing that an accurate assessment can be made. Many of the adverse health effects of lead toxicity are either irreversible or only partially reversible and therefore early detection of disease is very important.

This document outlines the medical monitoring program as defined by the occupational safety and health standard for inorganic lead. It reviews the adverse health effects of lead poisoning and describes the important elements of the history and physical examinations as they relate to these adverse effects. Finally, the appropriate laboratory testing for evaluating lead exposure and toxicity is presented.

It is hoped that this review and discussion will give the physician a better understanding of the OSHA standard with the ultimate goal of protecting the health and well-being of the worker exposed to lead under his or her care.

Appendix D to § 1915.1025—Qualitative Fit Test Protocols

This appendix specifies the only allowable qualitative fit test protocols permissible for compliance with paragraph (f)(3)(ii).

I. Isoamyl Acetate Protocol

A. Odor threshold screening.

1. Three 1–liter glass jars with metal lids (e.g. Mason or Bell jars) are required.

2. Odor-free water (e.g. distilled or spring water) at approximately 25°C shall be used for the solutions.

3. The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1-liter jar and shaking for 30 seconds. This solution shall be prepared new at least weekly.

4. The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but may not be connected to the same recirculating ventilation system.

5. The odor test solution is prepared in a second jar by placing .4 cc of the stock solution into 500 cc of odor free water using a clean dropper or pipette. Shake for 30 seconds and allow to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution may be used for only one day.

6. A test blank is prepared in a third jar by adding 500 cc of odor free water.

7. The odor test and test blank jars shall be labelled 1 and 2 for jar identification. If the labels are put on the lids they can be periodically *dried off* and switched to avoid people thinking the same jar always has the IAA.

8. The following instructions shall be typed on a card and placed on the table in front of the two test jars (i.e. 1 and 2);

"The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

9. The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

10. If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA QLFT may not be used.

11. If the test subject correctly identifies the jar containing the odor test solution he may proceed to respirator selection and fit testing.

B. Respirator selection.

1. The test subject shall be allowed to select the most comfortable respirator from a large array of various sizes and manufacturers that includes at least three sizes of elastomeric half facepieces and units of at least two manufacturers.

2. The selection process shall be conducted in a room separate from the fit-test chamber to prevent odor fatigue. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to assess an "comfortable" respirator. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This may not constitute his formal training on respirator use, only a review.

3. The test subject should understand that he is being asked to select the respirator which provides the most comfortable fit for him. Each respirator represents a different size and shape and, if fit properly, will provide adequate protection.

4. The test subject holds each facepiece up to his face and eliminates those which are obviously not giving a comfortable fit. Normally, selection will begin with a half-mask and if a fit cannot be found here, the subject will be asked to go to the full facepiece respirators. (A small percentage of users will not be able to wear any half-mask.)

5. The more comfortable facepieces are recorded; the most comfortable mask is donned and *worn at least five minutes* to assess comfort. Assistance in assessing comfort can be given by discussing the points in #6 below. If the test subject is not familiar with using a particular respirator, he shall be directed to don the mask several times and to adjust the straps each time, so that he becomes adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject:

- Chin properly placed.
- Positioning of mask on nose.
- Strap tension.
- Fit across nose bridge.
- Room for safety glasses.
- Distance from nose to chin.
- Room to talk.
- Tendency to slip.
- Cheeks filled out.
- Self-observation in mirror.
- Adequate time for assessment.

7. The test subject shall conduct the conventional negative and positive-pressure fit checks (e.g. see ANSI Z88.2–1980). Before conducting the negative- or positive-pressure checks, the subject shall be told to "seat" his mask by rapidly moving the head side-to-side and up and down, taking a few deep breaths.

8. The test subject is now ready for fit testing.

9. After passing the fit test, the test subject shall be questioned again regarding the comfort of the respirator. If it has become uncomfortable, another model of respirator shall be tried.

10. The employee shall be given the opportunity to select a different facepiece and be retested if during the first two weeks of on-the-job wear the chosen facepiece becomes unacceptably uncomfortable.

C. Fit test.

1. The fit test chamber shall be substantially similar to a clear 55 gallon drum liner suspended inverted over a 2 foot diameter frame, so that the top of chamber is about 6 inches above the test subject's head. The inside top center of the chamber shall have a small hook attached.

2. Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or masks shall be changed at least weekly.

3. After selecting, donning, and properly adjusting a respirator himself, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hook, to prevent general room contamination.

4. A copy of the following test exercises and rainbow (or equally effective) passage shall be taped to the inside of the test chamber:

Test Exercises

i. Normal breathing.

ii. Deep breathing. Be certain breaths are *deep* and *regular*.

iii. Turning head from side-to-side. Be certain movement is complete. Alert the test subject not to bump the respirator on the shoulders. Have the test subject inhale when his head is at either side.

iv. Nodding head up-and-down. Be certain motions are complete and made about every second. Alert the test subject not bump the respirator on the chest. Have the test subject inhale when his head is in the fully up position.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

vi. Normal breathing.

5. Each test subject shall wear his respirator for at least 10 minutes before starting the fit test.

6. Upon entering the test chamber, the test subject shall be given a 6 inch by 5 inch piece of paper towel or other porous absorbent single ply material, folded in half and wetted with three-quarters of one cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

7. Allow two minutes for the IAA test concentration to be reached before starting the fit-test exercises. This would be an appropriate time to talk with the test subject, to explain the fit test, the importance of his cooperation, the purpose for the head exercises, or to demonstrate some of the exercises.

8. Each exercise described in No. 4 above shall be performed for at least one minute.

9. If at any time during the test, the subject detects the banana-like odor of IAA, he shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

10. Upon returning to the selection room, the subject shall remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber, etc. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

11. If a person cannot be fitted with the selection of half-mask respirators, include full facepiece models in the selection process. When a respirator is found that passes the test, its efficiency shall be demonstrated for the subject by having him break the face seal and take a breath before exiting the chamber.

12. When the test subject leaves the chamber he shall remove the saturated towel, returning it to the test conductor. To keep the area from becoming contaminated, the used towels shall be kept in a self-sealing bag. There is no significant IAA concentration buildup in the test chamber from subsequent tests.

13. Persons who have successfully passed this fit test may be assigned the use of the tested respirator in atmospheres with up to 10 times the PEL of airborne lead. In other words this IAA protocol may be used to assign a protection factor no higher than 10.

II. Saccharin Solution Aerosol Protocol

A. Taste threshold screening.

1. Threshold screening as well as fit testing employees shall use an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly of part # FT 14 and FT 15 combined is adequate.

2. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

3. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

4. The test subject shall don the test enclosure. For the threshold screening test, he shall breath through his open mouth with tongue extended.

5. Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

6. The threshold check solution consists of 0.83 grams of sodium saccharin, USP in water. It can be prepared by putting 1 cc of the test solution (see C6 below) in 100 cc of water.

7. To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely then released and allowed to fully expand.

8. Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

9. If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

10. If the second response is negative ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

11. The test conductor will take note of the number of squeezes required to elicit a taste response.

12. If the saccharin is not tasted after 30 squeezes (Step 9), the test subject may not perform the saccharin fit test.

13. If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

14. Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

15. The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

B. Respirator selection.

Respirators shall be selected as described in section IB above, except that each respirator shall be equipped with a particulate filter cartridge.

C. Fit test.

1. The fit test uses the same enclosure described in B1 and B2 above

2. Each test subject shall wear his respirator for at least 10 minutes before starting the fit test.

3. The test subject shall don the enclosure while wearing the respirator selected in section A above. This respirator shall be properly adjusted and equipped with a particulate filter cartridge.

4. The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

5. A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

6. The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

7. As before, the test subject shall breathe through the open mouth with tongue extended.

8. The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure and the fit test solution is sprayed into the enclosure using the same technique as for the taste threshold screening and the same number of squeezes required to elicit a taste response in the screening. (See B 10 above).

9. After generation of the aerosol the test subject shall be instructed to perform the following exercises for one minute each.

i. Normal breathing.

ii. Deep breathing. Be certain breaths are *deep* and *regular*.

iii. Turning head from side-to-side. Be certain movement is complete. Alert the test subject not to bump the respirator on the shoulders. Have the test subject inhale when his head is at either side.

iv. Nodding head up-and-down. Be certain motions are complete. Alert the test subject not to bump the respirator on the chest. Have the test subject inhale when his head in the fully up position.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

10. Every 30 seconds, the aerosol concentration shall be replenished using one-half the number of squeeze as initially (C8).

11. The test subject shall so indicate to the test conductor if at any time during the fit test the taste of saccharin is detected.

12. If the saccharin is detected the fit is deemed unsatisfactory and a different respirator shall be tried.

13. Successful completion of the test protocol shall allow the use of the tested respirator in contaminated atmospheres up to 10 times the PEL. In other words this protocol may be used assign protection factors no higher than ten.

III. Irritant Fume Protocol

A. Respirator selection.

Respirators shall be selected as described in section IB above, except that each respirator shall be equipped with high efficiency cartridges.

B. Fit test.

1. The test subject shall be allowed to smell a weak concentration of the irritant smoke to familiarize him with the characteristic odor of each.

2. The test subject shall properly don the respirator selected as above, and wear it for at least 10 minutes before starting the fit test.

3. The test conductor shall review this protocol with the test subject before testing.

4. The test subject shall perform the conventional positive pressure and negative pressure fit checks. Failure of either check shall be cause to select an alternate respirator.

5. Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part No. 5645, or equivalent. Attach a short length of tubing to one end of the smoke tube. Attach the other end of the smoke tube to a low pressure air pump set to deliver 200 milliliters per minute.

6. Advise the test subject that the smoke can be irritating to the eyes and instruct him to keep his eyes closed while the test is performed.

7. The test conductor shall direct the stream of irritant smoke from the tube towards the faceseal area of the test subject. He shall begin at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

8. The following exercises shall be performed while the respirator seal is being challenged by the smoke. Each shall be performed for one minute.

i. Normal breathing.

ii. Deep breathing. Be certain breaths are *deep* and *regular*.

iii. Turning head from side-to-side. Be certain movement is complete. Alert the test subject not to bump the respirator on the shoulders. Have test subject inhale when his head is at either side.

iv. Nodding head up-and-down. Be certain motions are complete. Alert the test subject not to bump the respirator on the chest. Have the test subject inhale when his head is in the fully up position.

v. Talking—slowly and distinctly, count backwards from 100.

vi. Normal breathing.

9. If the irritant smoke produces an involuntary reaction (cough) by the test subject, the test conductor shall stop the test. In this case the tested respirator is rejected and another respirator shall be selected.

10. Each test subject passing the smoke test without evidence of a response shall be given a sensitivity check of the smoke from the same tube to determine whether he reacts to the smoke. Failure to evoke a response shall void the fit test.

11. Steps B4, B7, B8 of this protocol shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the irritant smoke.

12. Respirators successfully tested by the protocol may be used in contaminated atmospheres up to ten times the PEL. In other words this protocol may be used to assign protection factors not exceeding ten.

§ 1915.1028 Benzene.

(a) *Scope and application.* (1) This section applies to all occupational exposures to benzene. Chemical Abstracts Service Registry No. 71–43–2, except as provided in paragraphs (a)(2) and (a)(3) of this section.

(2) This section does not apply to:

(i) The storage, transportation, distribution, dispensing, sale or use of gasoline, motor fuels, or other fuels containing benzene subsequent to its final discharge from bulk wholesale storage facilities, except that operations where gasoline or motor fuels are dispensed for more than 4 hours per day in an indoor location are covered by this section.

(ii) Loading and unloading operations at bulk wholesale storage facilities which use vapor control systems for all loading and unloading operations, except for the provisions of 29 CFR 1915.1200 as incorporated into this section and the emergency provisions of paragraphs (g) and (i)(4) of this section.

(iii) The storage, transportation, distribution or sale of benzene or liquid mixtures containing more than 0.1 percent benzene in intact containers or in transportation pipelines while sealed in such a manner as to contain benzene vapors or liquid, except for the provisions of 29 CFR 1915.1200 as incorporated into this section and the emergency provisions of paragraphs (g) and (i)(4) of this section.

(iv) Containers and pipelines carrying mixtures with less than 0.1 percent benzene and natural gas processing plants processing gas with less than 0.1 percent benzene.

(v) Work operations where the only exposure to benzene is from liquid mixtures containing 0.5 percent or less of benzene by volume, or the vapors released from such liquids until September 12, 1988; work operations where the only exposure to benzene is from liquid mixtures containing 0.3 percent or less of benzene by volume or the vapors released from such liquids from September 12, 1988, to September 12, 1989; and work operations where the only exposure to benzene is from liquid mixtures containing 0.1 percent or less of benzene by volume or the vapors released from such liquids after September 12, 1989; except that tire building machine operators using solvents with more than 0.1 percent benzene are covered by paragraph (i) of this section.

(vi) Oil and gas drilling, production and servicing operations.

(vii) Coke oven batteries.

(3) The cleaning and repair of barges and tankers which have contained benzene are excluded from paragraph (f) methods of compliance, paragraph (e)(1) exposure monitoring-general, and paragraph (e)(6) accuracy of monitoring. Engineering and work practice controls shall be used to keep exposures below 10 ppm unless it is proven to be not feasible.

(b) *Definitions.*

Action level means an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring and measuring procedures under paragraph (l) of this section, or any other person authorized by the Act or regulations issued under the Act.

Benzene (C_6H_6) (CAS Registry No. 71–43–2) means liquefied or gaseous benzene. It includes benzene contained in liquid mixtures and the benzene vapors released by these liquids. It does not include trace amounts of unreacted benzene contained in solid materials.

Bulk wholesale storage facility means a bulk terminal or bulk plant where fuel is stored prior to its delivery to wholesale customers.

Container means any barrel, bottle, can, cylinder, drum, reaction vessel, storage tank, or the like, but does not include piping systems.

Day means any part of a calendar day.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which may or does

result in an unexpected significant release of benzene.

Employee exposure means exposure to airborne benzene which would occur if the employee were not using respiratory protective equipment.

Regulated area means any area where airborne concentrations of benzene exceed or can reasonably be expected to exceed, the permissible exposure limits, either the 8-hour time weighted average exposure of 1 ppm or the short-term exposure limit of 5 ppm for 15 minutes.

Vapor control system means any equipment used for containing the total vapors displaced during the loading of gasoline, motor fuel or other fuel tank trucks and the displacing of these vapors through a vapor processing system or balancing the vapor with the storage tank. This equipment also includes systems containing the vapors displaced from the storage tank during the unloading of the tank truck which balance the vapors back to the tank truck.

(c) *Permissible exposure limits (PELs)*—(1) *Time-weighted average limit (TWA).* The employer shall assure that no employee is exposed to an airborne concentration of benzene in excess of one part of benzene per million parts of air (1 ppm) as an 8-hour time-weighted average.

(2) *Short-term exposure limit (STEL).* The employer shall assure that no employee is exposed to an airborne concentration of benzene in excess of five (5) ppm as averaged over any 15 minute period.

(d) *Regulated areas.* (1) The employer shall establish a regulated area wherever the airborne concentration of benzene exceeds or can reasonably be expected to exceed the permissible exposure limits, either the 8-hour time weighted average exposure of 1 ppm or the short-term exposure limit of 5 ppm for 15 minutes.

(2) Access to regulated areas shall be limited to authorized persons.

(3) Regulated areas shall be determined from the rest of the workplace in any manner that minimizes the number of employees exposed to benzene within the regulated area.

(e) *Exposure monitoring*—(1) *General.* (i) Determinations of employee exposure shall be made from breathing zone air samples that are representative of each employee's average exposure to airborne benzene.

(ii) Representative 8-hour TWA employee exposures shall be determined on the basis of one sample or samples representing the full shift exposure for each job classification in each work area.

(iii) Determinations of compliance with the STEL shall be made from 15 minute employee breathing zone samples measured at operations where there is reason to believe exposures are high, such as where tanks are opened, filled, unloaded or gauged; where containers or process equipment are opened and where benzene is used for cleaning or as a solvent in an uncontrolled situation. The employer may use objective data, such as measurements from brief period measuring devices, to determine where STEL monitoring is needed.

(iv) Except for initial monitoring as required under paragraph (e)(2) of this section, where the employer can document that one shift will consistently have higher employee exposures for an operation, the employer shall only be required to determine representative employee exposure for that operation during the shift on which the highest exposure is expected.

(2) *Initial monitoring.* (i) Each employer who has a place of employment covered under paragraph (a)(1) of this section shall monitor each of these workplaces and work operations to determine accurately the airborne concentrations of benzene to which employees may be exposed.

(ii) The initial monitoring required under paragraph (e)(2)(i) of this section shall be completed by 60 days after the effective date of this standard or within 30 days of the introduction of benzene into the workplace. Where the employer has monitored within one year prior to the effective date of this standard and the monitoring satisfies all other requirements of this section, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (e)(2)(i) of this section.

(3) *Periodic monitoring and monitoring frequency.* (i) If the monitoring required by paragraph (e)(2)(i) of this section reveals employee exposure at or above the action level but at or below the TWA, the employer shall repeat such monitoring for each such employee at least every year.

(ii) If the monitoring required by paragraph (e)(2)(i) of this section reveals employee exposure above the TWA, the employer shall repeat such monitoring for each such employee at least every six (6) months.

(iii) The employer may alter the monitoring schedule from every six months to annually for any employee for whom two consecutive measurements taken at least 7 days apart indicate that the employee exposure has decreased to the TWA or below, but is at or above the action level.

(iv) Monitoring for the STEL shall be repeated as necessary to evaluate exposures of employees subject to short term exposures.

(4) *Termination of monitoring.* (i) If the initial monitoring required by paragraph (e)(2)(i) of this section reveals employee exposure to be below the action level the employer may discontinue the monitoring for that employee, except as otherwise required by paragraph (e)(5) of this section.

(ii) If the periodic monitoring required by paragraph (e)(3) of this section reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level the employer may discontinue the monitoring for that employee, except as otherwise required by paragraph (e)(5).

(5) *Additional monitoring.* (i) The employer shall institute the exposure monitoring required under paragraphs (e)(2) and (e)(3) of this section when there has been a change in the production, process, control equipment, personnel or work practices which may result in new or additional exposures to benzene, or when the employer has any reason to suspect a change which may result in new or additional exposures.

(ii) Whenever spills, leaks, ruptures or other breakdowns occur that may lead to employee exposure, the employer shall monitor (using area or personal sampling) after the cleanup of the spill or repair of the leak, rupture or other breakdown to ensure that exposures have returned to the level that existed prior to the incident.

(6) *Accuracy of monitoring.* Monitoring shall be accurate, to a confidence level of 95 percent, to within plus or minus 25 percent for airborne concentrations of benzene.

(7) *Employee notification of monitoring results.* (i) The employer shall, within 15 working days after the receipt of the results of any monitoring performed under this standard, notify each employee of these results in writing either individually or by posting of results in an appropriate location that is accessible to affected employees.

(ii) Whenever the PELs are exceeded, the written notification required by paragraph (e)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce the employee exposure to or below the PEL, or shall refer to a document available to the employee which states the corrective actions to be taken.

(f) *Methods of compliance*—(1) *Engineering controls and work practices.* (i) The employer shall

institute engineering controls and work practices to reduce and maintain employee exposure to benzene at or below the permissible exposure limits, except to the extent that the employer can establish that these controls are not feasible or where the provisions of paragraph (f)(1)(iii) or (g)(1) of this section apply.

(ii) Wherever the feasible engineering controls and work practices which can be instituted are not sufficient to reduce employee exposure to or below the PELs, the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protection which complies with the requirements of paragraph (g) of this section.

(iii) Where the employer can document that benzene is used in a workplace less than a total of 30 days per year, the employer shall use engineering controls, work practice controls or respiratory protection or any combination of these controls to reduce employee exposure to benzene to or below the PELs, except that employers shall use engineering and work practice controls, if feasible, to reduce exposure to or below 10 ppm as an 8-hour TWA.

(2) *Compliance program.* (i) When any exposures are over the PEL, the employer shall establish and implement a written program to reduce employee exposure to or below the PEL primarily by means of engineering and work practice controls, as required by paragraph (f)(1) of this section.

(ii) The written program shall include a schedule for development and implementation of the engineering and work practice controls. These plans shall be reviewed and revised as appropriate based on the most recent exposure monitoring data, to reflect the current status of the program.

(iii) Written compliance programs shall be furnished upon request for examination and copying to the Assistant Secretary, the Director, affected employees and designated employee representatives.

(g) *Respiratory protection*—(1) *General.* The employer shall provide respirators, and assure that they are used, where required by this section. Respirators shall be used in the following circumstances:

(i) During the time period necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations for which the employer establishes that compliance with either the TWA or STEL through the use of engineering and work practice controls is not feasible, such as some maintenance and repair activities, vessel cleaning, or other operations where engineering and work practice controls are infeasible because exposures are intermittent in nature and limited in duration;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient or are not required under paragraph (f)(1)(iii) of this section to reduce exposure to or below the PELs; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required or allowed under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1, and shall assure that the employee uses the respirator provided.

(ii) The employer shall select respirators from among those jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11. Negative pressure respirators shall have filter elements approved by MSHA/NIOSH for organic vapors or benzene.

(iii) Any employee who cannot wear a negative pressure respirator shall be given the option of wearing a respirator with less breathing resistance such as a powered air-purifying respirator or supplied air respirator.

(3) *Respirator program.* The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e) and (f).

(4) *Respirator use.* (i) Where air-purifying respirators are used, the employer shall replace the air purifying element at the expiration of service life or at the beginning of each shift in which they will be used, whichever comes first.

(ii) If an air purifying element becomes available with an end of useful life indicator for benzene approved by MSHA/NIOSH, the element may be used until such time as the indicator shows no further useful life.

(iii) The employer shall permit employees who wear respirators to leave the regulated area to wash their faces and respirator facepieces as necessary in order to prevent skin irritation associated with respirator use or to change the filter elements of air-purifying respirators whenever they detect a change in breathing resistance or chemical vapor breakthrough.

(5) *Respirator fit testing.* (i) The employer shall perform, and certify the results of, either quantitative or qualitative fit tests at the time of initial fitting and at least annually thereafter for each employee wearing a negative pressure respirator. The test shall be used to select a respirator facepiece which exhibits minimum leakage and provides the required protection as prescribed in Table 1. The employer shall provide and assure that the employee wears a respirator demonstrated by the fit test to provide the required protection.

(ii) The employer shall follow the test protocols outlined in Appendix E of this standard for whichever type of fit testing the employer chooses.

TABLE 1—RESPIRATORY PROTECTION FOR BENZENE

Airborne concentration of benzene or condition of use	Respirator type
(a) Less than or equal to 10 ppm.	(1) Half-mask air-purifying respirator with organic vapor cartridge.
(b) Less than or equal to 50 ppm.	(1) Full facepiece respirator with organic vapor cartridges. (1) Full facepiece gas mask with chin style canister.[1]
(c) Less than or equal to 100 ppm.	(1) Full facepiece powered air-purifying respirator with organic vapor canister.[1]
(d) Less than or equal to 1,000 ppm.	(1) Supplied air respirator with full facepiece in positive-pressure mode.
(e) Greater than 1,000 ppm or unknown concentration.	(1) Self-contained breathing apparatus with full facepiece in positive pressure mode. (2) Full facepiece positive- pressure supplied-air respirator with auxiliary self-contained air supply.
(f) Escape	(1) Any organic vapor gas mask; or (2) Any self-contained breathing apparatus with full facepiece.
(g) Firefighting	(1) Full facepiece self-contained breathing apparatus in positive pressure mode.

[1] Canisters must have a minimum service life of four (4) hours when tested at 150 ppm benzene, at a flow rate of 64 LPM, 25 °C, and 85% relative humidity for non-powered air purifying respirators. The flow rate shall be 115 LPM and 170 LPM respectively for tight fitting and loose fitting powered air-purifying respirators.

(h) *Protective clothing and equipment.* Personal protective clothing and equipment shall be worn where appropriate to prevent eye contact and limit dermal exposure to liquid benzene. Protective clothing and

equipment shall be provided by the employer at no cost to the employee and the employer shall assure its use where appropriate. Eye and face protection shall meet the requirements of 29 CFR 1910.133.

(i) *Medical surveillance*—(1) *General.* (i) The employer shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PELs 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer; and for employees involved in the tire building operations called tire building machine operators, who use solvents containing greater than 0.1 percent benzene.

(ii) The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician and that all laboratory tests are conducted by an accredited laboratory.

(iii) The employer shall assure that persons other than licensed physicians who administer the pulmonary function testing required by this section shall complete a training course in spirometry sponsored by an appropriate governmental, academic or professional institution.

(iv) The employer shall assure that all examinations and procedures are provided without cost to the employee and at a reasonable time and place.

(2) *Initial examination.* (i) Within 60 days of the effective date of this standard, or before the time of initial assignment, the employer shall provide each employee covered by paragraph (i)(1)(i) of this section with a medical examination including the following elements:

(A) A detailed occupational history which includes:

(1) Past work exposure to benzene or any other hematological toxins,

(2) A family history of blood dyscrasias including hematological neoplasms;

(3) A history of blood dyscrasias including genetic hemoglobin abnormalities, bleeding abnormalities, abnormal function of formed blood elements;

(4) A history of renal or liver dysfunction;

(5) A history of medicinal drugs routinely taken;

(6) A history of previous exposure to ionizing radiation and

(7) Exposure to marrow toxins outside of the current work situation.

(B) A complete physical examination.

(C) *Laboratory tests.* A complete blood count including a leukocyte count with differential, a quantitative thrombocyte count, hematocrit, hemoglobin, erythrocyte count and erythrocyte indices (MCV, MCH, MCHC). The results of these tests shall be reviewed by the examining physician.

(D) Additional tests as necessary in the opinion of the examining physician, based on alterations to the components of the blood or other signs which may be related to benzene exposure; and

(E) For all workers required to wear respirators for at least 30 days a year, the physical examination shall pay special attention to the cardiopulmonary system and shall include a pulmonary function test.

(ii) No initial medical examination is required to satisfy the requirements of paragraph (i)(2)(i) of this section if adequate records show that the employee has been examined in accordance with the procedures of paragraph (i)(2)(i) of this section within the twelve months prior to the effective date of this standard.

(3) *Periodic examinations.* (i) The employer shall provide each employee covered under paragraph (i)(1)(i) of this section with a medical examination annually following the previous examination. These periodic examinations shall incude at least the following elements:

(A) A brief history regarding any new exposure to potential marrow toxins, changes in medicinal drug use, and the appearance of physical signs relating to blood disorders:

(B) A complete blood count including a leukocyte count with differential, quantitative thrombocyte count, hemoglobin, hematocrit, erythrocyte count and erythrocyte indices (MCV, MCH, MCHC); and

(C) Appropriate additional tests as necessary, in the opinion of the examining physician, in consequence of alterations in the components of the blood or other signs which may be related to benzene exposure.

(ii) Where the employee develops signs and symptoms commonly associated with toxic exposure to benzene, the employer shall provide the employee with an additional medical examination which shall include those elements considered appropriate by the examining physician.

(iii) For persons required to use respirators for at least 30 days a year, a pulmonary function test shall be performed every three (3) years. A specific evaluation of the cardiopulmonary system shall be made at the time of the pulmonary function test.

(4) *Emergency examinations.* (i) In addition to the surveillance required by (i)(1)(i), if an employee is exposed to benzene in an emergency situation, the employer shall have the employee provide a urine sample at the end of the employee's shift and have a urinary phenol test performed on the sample within 72 hours. The urine specific gravity shall be corrected to 1.024.

(ii) If the result of the urinary phenol test is below 75 mg phenol/L of urine, no further testing is required.

(iii) If the result of the urinary phenol test is equal to or greater than 75 mg phenol/L of urine, the employer shall provide the employee with a complete blood count including an erythrocyte count, leukocyte count with differential and thrombocyte count at monthly intervals for a duration of three (3) months following the emergency exposure.

(iv) If any of the conditions specified in paragraph (i)(5)(i) of this section exists, then the further requirements of paragraph (i)(5) of this section shall be met and the employer shall, in addition, provide the employees with periodic examinations if directed by the physician.

(5) *Additional examinations and referrals.* (i) Where the results of the complete blood count required for the initial and periodic examinations indicate any of the following abnormal conditions exist, then the blood count shall be repeated within 2 weeks.

(A) The hemoglobin level or the hematocrit falls below the normal limit [outside the 95% confidence interval (C.I.)] as determined by the laboratory for the particular geographic area and/or these indices show a persistent downward trend from the individual's pre-exposure norms; provided these findings cannot be explained by other medical reasons.

(B) The thrombocyte (platelet) count varies more than 20 percent below the employee's most recent values or falls outside the normal limit (95% C.I.) as determined by the laboratory.

(C) The leukocyte count is below 4,000 per mm^3 or there is an abnormal differential count.

(ii) If the abnormality persists, the examining physician shall refer the employee to a hematologist or an internist for further evaluation unless the physician has good reason to believe such referral is unnecessary. (See Appendix C for examples of conditions where a referral may be unnecessary.)

(iii) The employer shall provide the hematologist or internist with the

information required to be provided to the physician under paragraph (i)(6) of this section and the medical record required to be maintained by paragraph (k)(2)(ii) of this section.

(iv) The hematologist's or internist's evaluation shall include a determination as to the need for additional tests, and the employer shall assure that these tests are provided.

(6) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this regulation and its appendices;

(ii) A description of the affected employee's duties as they relate to the employee's exposure;

(iii) The employee's actual or representative exposure level:

(iv) A description of any personal protective equipment used or to be used; and

(v) Information from previous employment-related medical examinations of the affected employee which is not otherwise available to the examining physician.

(7) *Physician's written opinions.* (i) For each examination under this section, the employer shall obtain and provide the employee with a copy of the examining physician's written opinion within 15 days of the examination. The written opinion shall be limited to the following information:

(A) The occupationally pertinent results of the medical examination and tests;

(B) The physician's opinion concerning whether the employee has any detected medical conditions which would place the employee's health at greater than normal risk of material impairment from exposure to benzene;

(C) The physician's recommended limitations upon the employee's exposure to benzene or upon the employee's use of protective clothing or equipment and respirators.

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions resulting from benzene exposure which require further explanation or treatment.

(ii) The written opinion obtained by the employer shall not reveal specific records, findings and diagnoses that have no bearing on the employee's ability to work in a benzene-exposed workplace.

(8) *Medical removal plan.* (i) When a physician makes a referral to a hematologist/internist as required under paragraph (i)(5)(ii) of this section, the employee shall be removed from areas where exposures may exceed the action level until such time as the physician makes a determination under paragraph (i)(8)(ii) of this section.

(ii) Following the examination and evaluation by the hematologist/internist, a decision to remove an employee from areas where benzene exposure is above the action level or to allow the employee to return to areas where benzene exposure is above the action level shall be made by the physician in consultation with the hematologist/internist. This decision shall be communicated in writing to the employer and employee. In the case of removal, the physician shall state the required probable duration of removal from occupational exposure to benzene above the action level and the requirements for future medical examinations to review the decision.

(iii) For any employee who is removed pursuant to paragraph (i)(8)(ii) of this section, the employer shall provide a follow-up examination. The physician, in consultation with the hematologist/internist, shall make a decision within 6 months of the date the employee was removed as to whether the employee shall be returned to the usual job or whether the employee should be removed permanently.

(iv) Whenever an employee is temporarily removed from benzene exposure pursuant to paragraph (i)(8)(i) or (i)(8)(ii) of this section, the employer shall transfer the employee to a comparable job for which the employee is qualified (or can be trained for in a short period) and where benzene exposures are as low as possible, but in no event higher than the action level. The employer shall maintain the employee's current wage rate, seniority and other benefits. If there is no such job available, the employer shall provide medical removal protection benefits until such a job becomes available or for 6 months, whichever comes first.

(v) Whenever an employee is removed permanently from benzene exposure based on a physician's recommendation pursuant to paragraph (i)(8)(iii) of this section, the employee shall be given the opportunity to transfer to another position which is available or later becomes available for which the employee is qualified (or can be trained for in a short period) and where benzene exposures are as low as possible but in no event higher than the action level. The employer shall assure that such employee suffers no reduction in current wage rate, seniority or other benefits as a result of the transfer.

(9) *Medical removal protection benefits.* (i) The employer shall provide to an employee 6 months of medical removal protection benefits immediately following each occasion an employee is removed from exposure to benzene because of hematological findings pursuant to paragraphs (i)(8) (i) and (ii) of this section, unless the employee has been transferred to a comparable job where benzene exposures are below the action level.

(ii) For the purposes of this section, the requirement that an employer provide medical removal protection benefits means that the employer shall maintain the current wage rate, seniority and other benefits of an employee as though the employee had not been removed.

(iii) The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or from employment with another employer made possible by virtue of the employee's removal.

(j) *Communication of benzene hazards to employees*—(1) *Signs and labels.* (i) The employer shall post signs at entrances to regulated areas. The signs shall bear the following legend:

DANGER
BENZENE
CANCER HAZARD
FLAMMABLE—NO SMOKING
AUTHORIZED PERSONNEL ONLY
RESPIRATOR REQUIRED

(ii) The employer shall ensure that lables or other appropriate forms of warning are provided for containers of benzene within the workplace. There is no requirement to label pipes. The labels shall comply with the requirements of 29 CFR 1915.1200(f) and in addition shall include the following legend:

DANGER
CONTAINS BENZENE
CANCER HAZARD

(2) *Material safety data sheets.* (i) Employers shall obtain or develop, and shall provide access to their employees, to a material safety data sheet (MSDS) which addresses benzene and complies with 29 CFR 1915.1200.

(ii) Employers who are manufacturers or importers shall:

(A) Comply with paragraph (a) of this section, and

(B) Comply with the requirement in OSHA's Hazard Communication Standard, 29 CFR 1915.1200, that they deliver to downstream employers an MSDS which addresses benzene.

(3) *Information and training.* (i) The employer shall provide employees with

information and training at the time of their initial assignment to a work area where benzene is present. If exposures are above the action level, employees shall be provided with information and training at least annually thereafter.

(ii) The training program shall be in accordance with the requirements of 29 CFR 1915.1200(h) (1) and (2), and shall include specific information on benzene for each category of information included in that section.

(iii) In addition to the information required under 29 CFR 1915.1200, the employer shall:

(A) Provide employees with an explanation of the contents of this section, including Appendices A and B, and indicate to them where the standard is available; and

(B) Describe the medical surveillance program required under paragraph (i) of this section, and explain the information contained in Appendix C.

(k) *Recordkeeping*—(1) *Exposure measurements.* (i) The employer shall establish and maintain an accurate record of all measurements required by paragraph (e) of this section, in accordance with 29 CFR 1915.1120.

(ii) This record shall include:

(A) The dates, number, duration, and results of each of the samples taken, including a description of the procedure used to determine representative employee exposures;

(B) A description of the sampling and analytical methods used;

(C) A description of the type of respiratory protective devices worn, if any; and

(D) The name, social security number, job classification and exposure levels of the employee monitored and all other employees whose exposure the measurement is intended to represent.

(iii) The employer shall maintain this record for at least 30 years, in accordance with 29 CFR 1915.1120.

(2) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance required by paragraph (i) of this section, in accordance with 29 CFR 1915.1120.

(ii) This record shall include:

(A) The name and social security number of the employee;

(B) The employer's copy of the physician's written opinion on the initial, periodic and special examinations, including results of medical examinations and all tests, opinions and recommendations;

(C) Any employee medical complaints related to exposure to benzene;

(D) A copy of the information provided to the physician as required by paragraphs (i)(6) (ii) through (v) of this section; and

(E) A copy of the employee's medical and work history related to exposure to benzene or any other hematologic toxins.

(iii) The employer shall maintain this record for at least the duration of employment plus 30 years, in accordance with 29 CFR 1915.1120.

(3) *Availability.* (i) The employer shall assure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee exposure monitoring records required by this paragraph shall be provided upon request for examination and copying to employees, employee representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a) through (e) and (g) through (i).

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying, to the subject employee, to anyone having the specific written consent of the subject employee, and to the Assistant Secretary in accordance with 29 CFR 1915.1120.

(4) *Transfer of records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three (3) months prior to disposal, and transmit them to the Director if required by the Director within that period.

(l) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees, or their designated representatives, an opportunity to observe the measuring or monitoring of employee exposure to benzene conducted pursuant to paragraph (e) of this section.

(2) *Observation procedures.* When observation of the measuring or monitoring of employee exposure to benzene requires entry into areas where the use of protective clothing and equipment or respirators is required, the employer shall provide the observer with personal protective clothing and equipment or respirators required to be worn by employees working in the area, assure the use of such clothing and equipment or respirators, and require the observer to comply with all other applicable safety and health procedures.

(m) *Dates*—(1) *Effective date.* The standard shall become effective December 10, 1987.

(2) *Start-up dates.* (i) The requirements of paragraph (a) through (m) of this section, except the engineering control requirements of paragraph (f)(1) of this section shall be completed within sixty (60) days after the effective date of the standard.

(ii) Engineering and work practice controls required by paragraph (f)(1) of this section shall be implemented no later than 2 years after the effective date of the standard.

(iii) Coke and coal chemical operations may comply with paragraph (m)(2)(ii) of this section or alternately include within the compliance program required by paragraph (f)(2) of this section, a requirement to phase in engineering controls as equipment is repaired and replaced. For coke and coal chemical operations choosing the latter alternative, compliance with the engineering controls requirements of paragraph (f)(1) of this section shall be achieved no later than 5 years after the effective date of this standard and substantial compliance with the engineering control requirements shall be achieved within 3 years of the effective date of this standard.

(n) *Appendices.* The information contained in Appendices A, B, C, and D is not intended, by itself, to create any additional obligations not otherwise imposed or to detract from any existing obligations. The protocols on respiratory fit testing in Appendix E are mandatory.

(Approved by the Office of Management and Budget under control number 1218–0129)

Appendix A to § 1915.1028—Substance Safety Data Sheet, Benzene

I. Substance Identification

A. Substance: Benzene.

B. Permissible Exposure: Except as to the use of gasoline, motor fuels and other fuels subsequent to discharge from bulk terminals and other exemptions specified in § 1915.1028(a)(2):

1. Airborne: The maximum time-weighted average (TWA) exposure limit is 1 part of benzene vapor per million parts of air (1 ppm) for an 8-hour workday and the maximum short-term exposure limit (STEL) is 5 ppm for any 15-minute period.

2. Dermal: Eye contact shall be prevented and skin contact with liquid benzene shall be limited.

C. Appearance and odor: Benzene is a clear, colorless liquid with a pleasant, sweet odor. The odor of benzene does not provide adequate warning of its hazard.

II. Health Hazard Data

A. *Ways in which benzene affects your health.* Benzene can affect your health if you inhale it, or if it comes in contact with your skin or eyes. Benzene is also harmful if you happen to swallow it.

B. *Effects of overexposure.* 1. Short-term (acute) overexposure: If you are overexposed

to high concentrations of benzene, well above the levels where its odor is first recognizable, you may feel breathless, irritable, euphoric, or giddy; you may experience irritation in eyes, nose, and respiratory tract. You may develop a headache, feel dizzy, nauseated, or intoxicated. Severe exposures may lead to convulsions and loss of consciousness.

2. Long-term (chronic) exposure. Repeated or prolonged exposure to benzene, even at relatively low concentrations, may result in various blood disorders, ranging from anemia to leukemia, an irreversible, fatal disease. Many blood disorders associated with benzene exposure may occur without symptoms.

III. Protective Clothing and Equipment

A. *Respirators.* Respirators are required for those operations in which engineering controls or work practice controls are not feasible to reduce exposure to the permissible level. However, where employers can document that benzene is present in the workplace less than 30 days a year, respirators may be used in lieu of engineering controls. If respirators are worn, they must have joint Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (NIOSH) seal of approval, and cartridge or canisters must be replaced before the end of their service life, or the end of the shift, whichever occurs first. If you experience difficulty breathing while wearing a respirator, you may request a positive pressure respirator from your employer. You must be thoroughly trained to use the assigned respirator, and the training will be provided by your employer.

B. *Protective Clothing.* You must wear appropriate protective clothing (such as boots, gloves, sleeves, aprons, etc.) over any parts of your body that could be exposed to liquid benzene.

C. *Eye and Face Protection.* You must wear splash-proof safety goggles if it is possible that benzene may get into your eyes. In addition, you must wear a face shield if your face could be splashed with benzene liquid.

IV. Emergency and First Aid Procedures

A. *Eye and face exposure.* If benzene is splashed in your eyes, wash it out immediately with large amounts of water. If irritation persists or vision appears to be affected see a doctor as soon as possible.

B. *Skin exposure.* If benzene is spilled on your clothing or skin, remove the contaminated clothing and wash the exposed skin with large amounts of water and soap immediately. Wash contaminated clothing before you wear it again.

C. *Breathing.* If you or any other person breathes in large amounts of benzene, get the exposed person to fresh air at once. Apply artificial respiration if breathing has stopped. Call for medical assistance or a doctor as soon as possible. Never enter any vessel or confined space where the benzene concentration might be high without proper safety equipment and at least one other person present who will stay outside. A life line should be used.

D. *Swallowing.* If benzene has been swallowed and the patient is conscious, do not induce vomiting. Call for medical assistance or a doctor immediately.

V. Medical Requirements

If you are exposed to benzene at a concentration at or above 0.5 ppm as an 8-hour time-weighted average, or have been exposed at or above 10 ppm in the past while employed by your current employer, your employer is required to provide a medical examination and history and laboratory tests within 60 days of the effective date of this standard and annually thereafter. These tests shall be provided without cost to you. In addition, if you are accidentally exposed to benzene (either by ingestion, inhalation, or skin/eye contact) under emergency conditions known or suspected to constitute toxic exposure to benzene, your employer is required to make special laboratory tests available to you.

VI. Observation of Monitoring

Your employer is required to perform measurements that are representative of your exposure to benzene and you or your designated representative are entitled to observe the monitoring procedure. You are entitled to observe the steps taken in the measurement procedure, and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you or your representative must also be provided with, and must wear the protective clothing and equipment.

VII. Access to Records

You or your representative are entitled to see the records of measurements of your exposure to benzene upon written request to your employer. Your medical examination records can be furnished to yourself, your physician or designated representative upon request by you to your employer.

VIII. Precautions for Safe Use, Handling and Storage

Benzene liquid is highly flammable. It should be stored in tightly closed containers in a cool, well ventilated area. Benzene vapor may form explosive mixtures in air. All sources of ignition must be controlled. Use nonsparking tools when opening or closing benzene containers. Fire extinguishers, where provided, must be readily available. Know where they are located and how to operate them. Smoking is prohibited in areas where benzene is used or stored. Ask your supervisor where benzene is used in your area and for additional plant safety rules.

Appendix B to § 1915.1028—Substance Technical Guidlines, Benzene

I. Physical and Chemical Data

A. Substance identification.

1. *Synonyms:* Benzol, benzole, coal naphtha, cyclohexatriene, phene, phenyl hydride, pyrobenzol. (Benzin, petroleum benzin and Benzine do not contain benzene).

2. *Formula:* C_6H_6 (CAS Registry Number: 71–43–2)

B. Physical data.

1. Boiling Point (760 mm Hg): 80.1 °C (176 °F)

2. Specific Gravity (water=1): 0.879

3. Vapor Density (air=1): 2.7

4. Melting Point: 5.5 °C (42 °F)

5. Vapor Pressure at 20 °C (68 °F): 75 mm Hg

6. Solubility in Water: .06%

7. Evaporation Rate (ether=1): 2.8

8. Appearance and Odor: Clear, colorless liquid with a distinctive sweet odor.

II. Fire, Explosion, and Reactivity Hazard Data

A. Fire.

1. Flash Point (closed cup): −11 °C (12 °F)

2. Autoignition Temperature: 580 °C (1076 °F)

3. Flammable limits in Air, % by Volume: Lower: 1.3%, Upper: 7.5%

4. Extinguishing Media: Carbon dioxide, dry chemical, or foam.

5. Special Fire-Fighting procedures: Do not use solid stream of water, since stream will scatter and spread fire. Fine water spray can be used to keep fire-exposed containers cool.

6. Unusual fire and explosion hazards: Benzene is a flammable liquid. Its vapors can form explosive mixtures. All ignition sources must be controlled when benzene is used, handled, or stored. Where liquid or vapor may be released, such areas shall be considered as hazardous locations. Benzene vapors are heavier than air; thus the vapors may travel along the ground and be ignited by open flames or sparks at locations remote from the site at which benzene is handled.

7. Benzene is classified as a 1 B flammable liquid for the purpose of conforming to the requirements of 29 CFR 1910.106. A concentration exceeding 3,250 ppm is considered a potential fire explosion hazard. Locations where benzene may be present in quantities sufficient to produce explosive or ignitable mixtures are considered Class I Group D for the purposes of conforming to the requirements of 29 CFR 1910.309.

B. Reactivity.

1. Conditions contributing to instability: Heat.

2. Incompatibility: Heat and oxidizing materials.

3. Hazardous decomposition products: Toxic gases and vapors (such as carbon monoxide).

III. Spill and Leak Procedures

A. Steps to be taken if the material is released or spilled. As much benzene as possible should be absorbed with suitable materials, such as dry sand or earth. That remaining must be flushed with large amounts of water. Do not flush benzene into a confined space, such as a sewer, because of explosion danger. Remove all ignition sources. Ventilate enclosed places.

B. Waste disposal method. Disposal methods must conform to other jurisdictional regulations. If allowed, benzene may be disposed of: (a) By absorbing it in dry sand or earth and disposing in a sanitary landfill; (b) if small quantities, by removing it to a safe location from buildings or other combustible sources, pouring it in dry sand or earth and cautiously igniting it; and (c) if large quantities, by atomizing it in a suitable combustion chamber.

IV. Miscellaneous Precautions

A. High exposure to benzene can occur when transferring the liquid from one container to another. Such operations should

be well ventilated and good work practices must be established to avoid spills.

B. Use non-sparking tools to open benzene containers which are effectively grounded and bonded prior to opening and pouring.

C. Employers must advise employees of all plant areas and operations where exposure to benzene could occur. Common operations in which high exposures to benzene may be encountered are: the primary production and utilization of benzene, and transfer of benzene.

Appendix C to § 1915.1028—Medical Surveillance Guidelines for Benzene

I. Route of Entry

Inhalation; skin absorption.

II. Toxicology

Benzene is primarily an inhalation hazard. Systemic absorption may cause depression of the hematopoietic system, pancytopenia, aplastic anemia, and leukemia. Inhalation of high concentrations can affect central nervous system function. Aspiration of small amounts of liquid benzene immediately causes pulmonary edema and hemorrhage of pulmonary tissue. There is some absorption through the skin. Absorption may be more rapid in the case of abraded skin, and benzene may be more readily absorbed if it is present in a mixture or as a contaminant in solvents which are readily absorbed. The defatting action of benzene may produce primary irritation due to repeated or prolonged contact with the skin. High concentration are irritating to the eyes and the mucuous membranes of the nose, and respiratory tract.

III. Signs and Symptoms

Direct skin contact with benzene may cause erythema. Repeated or prolonged contact may result in drying, scaling dermatitis, or development of secondary skin infections. In addition, there is benzene absorption through the skin. Local effects of benzene vapor or liquid on the eye are slight. Only at very high concentrations is there any smarting sensation in the eye. Inhalation of high concentrations of benzene may have an initial stimulatory effect on the central nervous system characterized by exhilaration, nervous excitation, and/or giddiness, followed by a period of depression, drowsiness, or fatigue. A sensation of tightness in the chest accompanied by breathlessness may occur and ultimately the victim may lose consciousness. Tremors, convulsions and death may follow from respiratory paralysis or circulatory collapse in a few minutes to several hours following severe exposures.

The detrimental effect on the blood-forming system of prolonged exposure to small quantities of benzene vapor is of extreme importance. The hematopoietic system is the chief target for benzene's toxic effects which are manifested by alterations in the levels of formed elements in the peripheral blood. These effects have occurred at concentrations of benzene which may not cause irritation of mucous membranes, or any unpleasant sensory effects. Early signs and symptoms of benzene morbidity are varied, often not readily noticed and non-specific. Subjective complaints of headache, dizziness, and loss of appetite may precede or follow clinical signs. Rapid pulse and low blood pressure, in addition to a physical appearance of anemia, may accompany a subjective complaint of shortness of breath and excessive tiredness. Bleeding from the nose, gums, or mucous membranes, and the development of purpuric spots (small bruises) may occur as the condition progresses. Clinical evidence of leukopenia, anemia, and thrombocytopenia, singly or in combination, has been frequently reported among the first signs.

Bone marrow may appear normal, aplastic, or hyperplastic, and may not, in all situations, correlate with peripheral blood forming tissues. Because of variations in the susceptibility to benzene morbidity, there is no "typical" blood picture. The onset of effects of prolonged benzene exposure may be delayed for many months or years after the actual exposure has ceased and identification or correlation with benzene exposure must be sought out in the occupational history.

IV. Treatment of Acute Toxic Effects

Remove from exposure immediately. Make sure you are adequately protected and do not risk being overcome by fumes. Give oxygen or artificial resuscitation if indicated. Flush eyes, wash skin if contaminated and remove all contaminated clothing. Symptoms of intoxication may persist following severe exposures. Recovery from mild exposures is usually rapid and complete.

V. Surveillance and Preventive Considerations

A. General

The principal effects of benzene exposure which form the basis for this regulation are pathological changes in the hematopoietic system, reflected by changes in the peripheral blood and manifesting clinically as pancytopenia, aplastic anemia, and leukemia. Consequently, the medical surveillance program is designed to observe, on a regular basis, blood indices for early signs of these effects, and although early signs of leukemia are not usually available, emerging diagnostic technology and innovative regimes make consistent surveillance for leukemia, as well as other hematopoietic effects, essential.

Initial examinations are to be provided within 60 days of the effective date of this standard, or at the time of initial assignment, and periodic examinations annually thereafter. There are special provisions for medical tests in the event of hematologic abnormalities or for emergency situations.

The blood values which require referral to a hematologist or internist are noted in the standard in paragraph (i)(5). The standard specifies that blood abnormalities that persist must be referred "unless the physician has good reason to believe such referral is unnecessary" (paragraph (i)(5)). Examples of conditions that could make a referral unnecessary despite abnormal blood limits are iron or folate deficiency, menorrhagia, or blood loss due to some unrelated medical abnormality.

Symptoms and signs of benzene toxicity can be non-specific. Only a detailed history and appropriate investigative procedures will enable a physician to rule out or confirm conditions that place the employee at increased risk. To assist the examining physician with regard to which laboratory tests are necessary and when to refer an employee to the specialist, OSHA has established the following guidelines.

B. Hematology Guidelines

A minimum battery of tests is to be performed by strictly standardized methods.

1. Red cell, white cell, platelet counts, white blood cell differential, hematacrit and red cell indices must be performed by an accredited laboratory. The normal ranges for the red cell and white cell counts are influenced by altitude, race, and sex, and therefore should be determined by the accredited laboratory in the specific area where the tests are performed.

Either a decline from an absolute normal or an individual's base line to a subnormal value or a rise to a supra-normal value, are indicative of potential toxicity, particularly if all blood parameters decline. The normal total white blood count is approximately 7,200/mm^3 plus or minus 3,000. For cigarette smokers the white count may be higher and the upper range may be 2,000 cells higher than normal for the laboratory. In addition, infection, allergies and some drugs may raise the white cell count. The normal platelet count is approximately 250,000 with a range of 140,000 to 400,000. Counts outside this range should be regarded as possible evidence of benzene toxicity.

Certain abnormalities found through routine screening are of greater significance in the benzene-exposed worker and require prompt consultation with a specialist, namely:

a. Thrombocytopenia.

b. A trend of decreasing white cell, red cell, or platelet indices in an individual over time is more worrisome than an isolated abnormal finding at one test time. The importance of trend highlights the need to compare an individual's test results to baseline and/or previous periodic tests.

c. A constellation or pattern of abnormalities in the different blood indices is of more significance than a single abnormality. A low white count not associated with any abnormalities in other cell indices may be a normal statistical variation, whereas if the low white count is accompanied by decreases in the platelet and/or red cell indices, such a pattern is more likely to be associated with benzene toxicity and merits thorough investigation.

Anemia, leukopenia, macrocytosis or an abnormal differential white blood cell count should alert the physician to further investigate and/or refer the patient if repeat tests confirm the abnormalities. If routine screening detects an abnormality, follow-up tests which may be helpful in establishing the etiology of the abnormality are the peripheral blood smear and the reticulocyte count.

The extreme range of normal for reticulocytes is 0.4 to 2.5 percent of the red cells, the usual range being 0.5 to 1.2 percent of the red cells, but the typical value is in the range of 0.8 to 1.0 percent. A decline in reticulocytes to levels of less than 0.4 percent

is to be regarded as possible evidence (unless another specific cause is found) of benzene toxicity requiring accelerated surveillance. An increase in reticulocyte levels to about 2.5 percent may also be consistent with (but is not as characteristic of) benzene toxicity.

2. An important diagnostic test is a careful examination of the peripheral blood smear. As with reticulocyte count the smear should be with fresh uncoagulated blood obtained from a needle tip following venipuncture or from a drop of earlobe blood (capillary blood). If necessary, the smear may, under certain limited conditions, be made from a blood sample anticoagulated with EDTA (but never with oxalate or heparin). When the smear is to be prepared from a specimen of venous blood which has been collected by a commercial Vacutainer® type tube containing neutral EDTA, the smear should be made as soon as possible after the venesection. A delay of up to 12 hours is permissible between the drawing of the blood specimen into EDTA and the preparation of the smear if the blood is stored at refrigerator (not freezing) temperature.

3. The minimum mandatory observations to be made from the smear are:

a. The differential white blood cell count.

b. Description of abnormalities in the appearance of red cells.

c. Description of any abnormalities in the platelets.

d. A careful search must be made throughout of every blood smear for immature white cells such as band forms (in more than normal proportion, i.e., over 10 percent of the total differential count), any number of metamyelocytes, myelocytes or myeloblasts. Any nucleate or multinucleated red blood cells should be reported. Large "giant" platelets or fragments of megakaryocytes must be recognized.

An increase in the proportion of band forms among the neutrophilic granulocytes is an abnormality deserving special mention, for it may represent a change which should be considered as an early warning of benzene toxicity in the absence of other causative factors (most commonly infection). Likewise, the appearance of metamyelocytes, in the absence of another probable cause, is to be considered a possible indication of benzene-induced toxicity.

An upward trend in the number of basophils, which normally do not exceed about 2.0 percent of the total white cells, is to be regarded as possible evidence of benzene toxicity. A rise in the eosinophil count is less specific but also may be suspicious of toxicity if the rises above 6.0 percent of the total white count.

The normal range of monocytes is from 2.0 to 8.0 percent of the total white count with an average of about 5.0 percent. About 20 percent of individuals reported to have mild but persisting abnormalities caused by exposure to benzene show a persistent monocytosis. The findings of a monocyte count which persists at more than 10 to 12 percent of the normal white cell count (when the total count is normal) or persistence of an absolute monocyte count in excess of 800/mm^3 should be regarded as a possible sign of benzene-induced toxicity.

A less frequent but more serious indication of benzene toxicity is the finding in the peripheral blood of the so-called "pseudo" (or acquired) Pelger-Huet anomaly. In this anomaly many, or sometimes the majority, of the neutrophilic granulocytes possess two round nuclear segements—less often one or three round segments—rather than three normally elongated segments. When this anomaly is not hereditary, it is often but not invariably predictive of subsequent leukemia. However, only about two percent of patients who ultimately develop acute myelogenous leukemia show the acquired Pelger-Huet anomaly. Other tests that can be administered to investigate blood abnormalities are discussed below; however, such procedures should be undertaken by the hematologist.

An uncommon sign, which cannot be detected from the smear, but can be elicited by a "sucrose water test" of peripheral blood, is transient paroxysmal nocturnal hemoglobinuria (PNH), which may first occur insidiously during a period of established aplastic anemia, and may be followed within one to a few years by the appearance of rapidly fatal acute myelogenous leukemia. Clinical detection of PNH, which occurs in only one or two percent of those destined to have acute myelogenous leukemia, may be difficult; if the "sucrose water test" is positive, the somewhat more definitive Ham test, also known as the acid-serum hemolysis test, may provide confirmation.

e. Individuals documented to have developed acute myelogenous leukemia years after initial exposure to benzene may have progressed through a preliminary phase of hematologic abnormality. In some instances pancytopenia (i.e., a lowering in the counts of all circulating blood cells of bone marrow origin, but not to the extent implied by the term "aplastic anemia") preceded leukemia for many years. Depression of a single blood cell type or platelets may represent a harbinger of aplasia or leukemia. The finding of two or more cytopenias, or pancytopenia in a benzene-exposed individual, must be regarded as highly suspicious of more advanced although still reversible, toxicity. "Pancytopenia" coupled with the appearance of immature cells (myelocytes, myeloblasts, erythroblasts, etc.), with abnormal cells (pseudo Pelger-Huet anomaly, atypical nuclear heterochromatin, etc.), or unexplained elevations of white blood cells must be regarded as evidence of benzene overexposure unless proved otherwise. Many severely aplastic patients manifested the ominous finding of 5–10 percent myeloblasts in the marrow, occasional myeloblasts and myelocytes in the blood and 20–30% monocytes. It is evident that isolated cytopenias, pancytopenias, and even aplastic anemias induced by benzene may be reversible and complete recovery has been reported on cessation of exposure. However, since any of these abnormalities is serious, the employee must immediately be removed from any possible exposure to benzene vapor. Certain tests may substantiate the employee's prospects for progression or regression. One such test would be an examination of the bone marrow, but the decision to perform a bone marrow aspiration or needle biopsy is made by the hematologist.

The findings of basophilic stippling in circulating red blood cells (usually found in 1 to 5% of red cells following marrow injury), and detection in the bone marrow of what are termed "ringed sideroblasts" must be taken seriously, as they have been noted in recent years to be premonitory signs of subsequent leukemia.

Recently peroxidase-staining of circulating or marrow neutrophil granulocytes, employing benzidine dihydrochloride, have revealed the disappearance of, or diminution in, peroxidase in a sizable proportion of the granulocytes, and this has been reported as an early sign of leukemia. However, relatively few patients have been studied to date. Granulocyte granules are normally strongly peroxidase positive. A steady decline in leukocyte alkaline phosphatase has also been reported as suggestive of early acute leukemia. Exposure to benzene may cause an early rise in serum iron, often but not always associated with a fall in the reticulocyte count. Thus, serial measurements of serum iron levels may provide a means of determining whether or not there is a trend representing sustained suppression of erythropoiesis.

Measurement of serum iron, determination of peroxidase and of alkaline phosphatase activity in peripheral granulocytes can be performed in most pathology laboratories. Peroxidase and alkaline phosphatase staining are usually undertaken when the index of suspecion for leukemia is high.

Appendix D to § 1915.1028—Sampling and Analytical Methods for Benzene Monitoring and Measurement Procedures

Measurements taken for the purpose of determining employee exposure to benzene are best taken so that the representative average 8-hour exposure may be determined from a single 8-hour sample or two (2) 4-hour samples. Short-time interval samples (or grab samples) may also be used to determine average exposure level if a minimum of five measurements are taken in a random manner over the 8-hour work shift. Random sampling means that any portion of the work shift has the same change of being sampled as any other. The arithmetic average of all such random samples taken on one work shift is an estimate of an employee's average level of exposure for that work shift. Air samples should be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee). Sampling and analysis must be performed with procedures meeting the requirements of the standard.

There are a number of methods available for monitoring employee exposures to benzene. The sampling and analysis may be performed by collection of the benzene vaptor or charcoal absorption tubes, with subsequent chemical analysis by gas chromatography. Sampling and analysis may also be performed by portable direct reading instruments, real-time continuous monitoring systems, passive dosimeters or other suitable methods. The employer has the obligation of selecting a monitoring method which meets the accuracy and precision requirements of the standard under his unique field conditions. The standard requires that the method of monitoring must have an accuracy, to a 95 percent confidence level, of not less than plus or minus 25 percent for

concentrations of benzene greater than or equal to 0.5 ppm.

The OSHA Laboratory modified NIOSH Method S311 and evaluated it at a benzene air concentration of 1 ppm. A procedure for determining the benzene concentration in bulk material samples was also evalauted. This work, reported in OSHA Laboratory Method No. 12, includes the following two analytical procedures:

I. OSHA Method 12 for Air Samples

Analyte: Benzene
Matrix: Air
Procedure: Adsorption on charcoal, desorption with carbon disulfide, analysis by GC.
Detection limit: 0.04 ppm
Recommended air volume and sampling rate: 10L to 0.2 L/min.

1. Principle of the Method.

1.1 A known volume of air is drawn through a charcoal tube to trap the organic vapors present.

1.2. The charcoal in the tube is transferred to a small, stoppered vial, and the anlyte is desorbed with carbon disulfide.

1.3. An aliquot of the desorbed sample is injected into a gas chromatograph.

1.4 The area of the resulting peak is determined and compared with areas obtained from standards.

2. Advantages and disadvantages of the method.

2.1 The sampling device is small, portable, and involved no liquids. Interferences are minimal, and most of those which do occur can be eliminated by altering chromatographic conditions. The samples are analyzed by means of a quick, instrumental method.

2.2 The amount of sample which can be taken is limited by the number of milligrams that the tube will hold before overloading. When the sample value obtained for the backup section of the charcoal tube exceeds 25 percent of that found on the front section, the possibility of sample loss exists.

3. Apparatus.

3.1 A calibrated personal sampling pump whose flow can be determined within ±5 percent at the recommended flow rate.

3.2. Charcoal tubes: Glass with both ends flame sealed, 7 cm long with a 6-mm O.D. and a 4-mm I.D., containing 2 sections of 20/40 mesh activated charcoal separated by a 2-mm portion of urethane foam. The activated charcoal is prepared from coconut shells and is fired at 600° C prior to packing. The adsorbing section contains 100 mg of charcoal, the back-up section 50 mg. A 3-mm portion of urethane foam is placed between the outlet end of the tube and the back-up section. A plug of silanized glass wool is placed in front of the adsorbing section. The pressure drop across the tube must be less than one inch of mercury at a flow rate of 1 liter per minute.

3.3. Gas chromatograph equipped with a flame ionization detector.

3.4. Column (10-ft × ⅛-in stainless steel) packed with 80/100 Supelcoport coated with 20 percent SP 2100, 0.1 percent CW 1500.

3.5. An electronic integrator or some other suitable method for measuring peak area.

3.6. Two-milliliter sample vials with Teflon-lined caps.

3.7. Microliter syringes: 10-microliter (10-µL syringe, and other convenient sizes for making standards, 1-µL syringe for sample injections.

3.8. Pipets: 1.0 mL delivery pipets

3.9. Volumetric flasks: convenient sizes for making standard solutions.

4. Reagents.

4.1. Chromatographic quality carbon disulfide (CS_2). Most commercially available carbon disulfide contains a trace of benzene which must be removed. It can be removed with the following procedure:

Heat under reflux for 2 to 3 hours, 500 mL of carbon disulfide, 10 mL concentrated sulfuric acid, and 5 drops of concentrated nitric acid. The benzene is converted to nitrobenzene. The carbon disulfide layer is removed, dried with anhydrous sodium sulfate, and distilled. The recovered carbon disulfide should be benzene free. (It has recently been determined that benzene can also be removed by passing the carbon disulfide through 13x molecular sieve).

4.2. Benzene, reagent grade.

4.3. p-Cymene, reagent grade, (internal standard).

4.4. Desorbing reagent. The desorbing reagent is prepared by adding 0.05 mL of p-cymene per milliliter of carbon disulfide. (The internal standard offers a convenient means correcting analytical response for slight inconsistencies in the size of sample injections. If the external standard technique is preferred, the internal standard can be eliminated).

4.5. Purified GC grade helium, hydrogen and air.

5. Procedure.

5.1. Cleaning of equipment. All glassware used for the laboratory analysis should be properly cleaned and free of organics which could interfere in the analysis.

5.2. Calibration of personal pumps. Each pump must be calibrated with a representative charcoal tube in the line.

5.3. Collection and shipping of samples.

5.3.1. Immediately before sampling, break the ends of the tube to provide an opening at least one-half the internal diameter of the tube (2 mm).

5.3.2. The smaller section of the charcoal is used as the backup and should be placed nearest the sampling pump.

5.3.3. The charcoal tube should be placed in a vertical position during sampling to minimize channeling through the charcoal.

5.3.4 Air being sampled should not be passed through any hose or tubing before entering the charcoal tube.

5.3.5. A sample size of 10 liters is recommended. Sample at a flow rate of approximately 0.2 liters per minute. The flow rate should be known with an accuracy of at least ±5 percent.

5.3.6. The charcoal tubes should be capped with the supplied plastic caps immediately after sampling.

5.3.7. Submit at least one blank tube (a charcoal tube subjected to the same handling procedures, without having any air drawn through it) with each set of samples.

5.3.8. Take necessary shipping and packing precautions to minimize breakage of samples.

5.4. Analysis of samples.

5.4.1. Preparation of samples. In preparation for analysis, each charcoal tube is scored with a file in front of the first section of charcoal and broken open. The glass wool is removed and discarded. The charcoal in the first (larger) section is transferred to a 2-ml vial. The separating section of foam is removed and discarded; the second section is transferred to another capped vial. These two sections are analyzed separately.

5.4.2. Desorption of samples. Prior to analysis, 1.0 mL of desorbing solution is pipetted into each sample container. The desorbing solution consists of 0.05 µL internal standard per mL of carbon disulfide. The sample vials are capped as soon as the solvent is added. Desorption should be done for 30 minutes with occasional shaking.

5.4.3. GC conditions. Typical operating conditions for the gas chromatograph are:

1.30 mL/min (60 psig) helium carrier gas flow.

2.30 mL/min (40 psig) hydrogen gas flow to detector.

3.240 mL/min (40 psig) air flow to detector.

4.150 °C injector temperature.

5.250 °C detector temperature.

6.100 °C column temperature.

5.4.4. Injection size. 1 µL.

5.4.5. Measurement of area. The peak areas are measured by an electronic integrator or some other suitable form of area measurement.

5.4.6. An internal standard procedure is used. The integrator is calibrated to report results in ppm for a 10 liter air sample after correction for desorption efficiency.

5.5. Determination of desorption efficiency.

5.5.1. Importance of determination. The desorption efficiency of a particular compound can vary from one laboratory to another and from one lot of chemical to another. Thus, it is necessary to determine, at least once, the percentage of the specific compound that is removed in the desorption process, provided the same batch of charcoal is used.

5.5.2. Procedure for determining desorption efficiency. The reference portion of the charcoal tube is removed. To the remaining portion, amounts representing 0.5X, 1X, and 2X and (X represents target concentration) based on a 10 L air sample are injected into several tubes at each level. Dilutions of benzene with carbon disulfide are made to allow injection of measurable quantities. These tubes are then allowed to equilibrate at least overnight. Following equilibration they are analyzed following the same procedure as the samples. Desorption efficiency is determined by dividing the amount of benzene found by amount spiked on the tube.

6. Calibration and standards. A series of standards varying in concentration over the range of interest is prepared and analyzed under the same GC conditions that will be used on the samples. A calibration curve is prepared by plotting concentration (µg/mL) versus peak area.

7. Calculations. Benzene air concentration can be calculated from the following equation:

$mg/m^3=(A)(B)/(C)(D)$

Where: A=µg/mL benzene, obtained from the calibration curve

B=desorption volume (1 mL)

C=Liters of air sampled
D=desorption efficiency

The concentration in mg/m³ can be converted to ppm (at 25° and 760 mm) with following equation:

ppm=(mg/m³)(24.46)/(78.11)
Where: 24.46=molar volume of an ideal gas 25 °C and 760 mm
78.11=molecular weight of benzene

8. Backup Data.

8.1 Detection limit—Air Samples.

The detection limit for the analytical procedure is 1.28 ng with a coefficient of variation of 0.023 at this level. This would be equivalent to an air concentration of 0.04 ppm for a 10 L air sample. This amount provided a chromatographic peak that could be identifiable in the presence of possible interferences. The detection limit data were obtained by making 1 µL injections of a 1.283 µg/mL standard.

Injection	Area Count	
1	655.4	
2	617.5D	
3	662.0	X̄=640.2
4	641.1	SD=14.9
5	636.4	CV=0.023
6	629.2	

8.2. Pooled coefficient of variation—Air Samples. The pooled coefficient of variation for the analytical procedure was determined by 1 µL replicate injections of analytical standards. The standards were 16.04, 32.08, and 64.16 µg/mL, which are equivalent to 0.5, 1.0, and 2.0 ppm for a 10 L air sample respectively.

Injection	Area Counts		
	0.5 ppm	1.0 ppm	2.0 ppm
1	3996.5	8130.2	16481
2	4059.4	8235.6	16493
3	4052.0	8307.9	16535
4	4027.2	8263.2	16609
5	4046.8	8291.1	16552
6	4137.9	8288.8	16618
X̄=	4053.3	8254.0	16548.3
SD=	47.2	62.5	57.1
CV=	0.0116	0.0076	0.0034
C̄V̄=0.008			

8.3. Storage data—Air Samples

Samples were generated at 1.03 ppm benzene at 80% relative humidity, 22 °C, and 643 mm. All samples were taken for 50 minutes at 0.2 L/min. Six samples were analyzed immediately and the rest of the samples were divided into two groups by fifteen samples each. One group was stored at refrigerated temperature of −25 °C, and the other group was stored at ambient temperature (approximately 23 °C). These samples were analyzed over a period of fifteen days. The results are tabulated below.

PERCENT RECOVERY

Day analyzed	Refrigerated			Ambient		
0	97.4	98.7	98.9	97.4	98.7	98.9
0	97.1	100.6	100.9	97.1	100.6	100.9
2	95.8	96.4	95.4	95.4	96.6	96.9
5	93.9	93.7	92.4	92.4	94.3	94.1
9	93.6	95.5	94.6	95.2	95.6	96.6
13	94.3	95.3	93.7	91.0	95.0	94.6
15	96.8	95.8	94.2	92.9	96.3	95.9

8.4. Desorption data.

Samples were prepared by injecting liquid benzene onto the A section of charcoal tubes. Samples were prepared that would be equivalent to 0.5, 1.0, and 2.0 ppm for a 10 L air sample.

PERCENT RECOVERY

Sample	0.5 ppm	1.0 ppm	2.0 ppm
1	99.4	98.8	99.5
2	99.5	98.7	99.7
3	99.2	98.6	99.8
4	99.4	99.1	100.0
5	99.2	99.0	99.7
6	99.8	99.1	99.9
X̄=	99.4	98.9	99.8
SD=	0.22	0.21	0.18
CV=	0.0022	0.0021	0.0018
X̄=99.4			

8.5. Carbon disulfide.

Carbon disulfide from a number of sources was analyzed for benzene contamination. The results are given in the following table. The benzene contamiant can be removed with the procedures given in section 4.1.

Sample	µg Benzene/mL	ppm equivalent (for 10 L air sample)
Aldrich Lot 83017	4.20	0.13
Baker Lot 720364	1.01	0.03
Baker Lot 822351	1.01	0.03
Malinkrodt Lot WEMP	1.74	0.05
Malinkrodt Lot WDSJ	5.65	0.18
Malinkrodt Lot WHGA	2.90	0.09
Treated CS_2		

II. OSHA Laboratory Method No. 12 for Bulk Samples

Analyte: Benzene.

Matrix: Bulk Samples.

Procedure: Bulk Samples are analyzed directly by high performance liquid chromatography (HPLC).

Detection limits: 0.01% by volume.

1. Principle of the method.

1.1. An aliquot of the bulk sample to be analyzed is injected into a liquid chromatograph.

1.2. The peak area for benzene is determined and compared to areas obtained from standards.

2. Advantages and disadvantages of the method.

2.1. The analytical procedure is quick, sensitive, and reproducible.

2.2. Reanalysis of samples is possible.

2.3. Interferences can be circumvented by proper selection of HPLC parameters.

2.4. Samples must be free of any particulates that may clog the capillary tubing in the liquid chromatograph. This may require distilling the sample or clarifying with a clarification kit.

3. Apparatus.

3.1. Liquid chromatograph equipped with a UV detector.

3.2. HPLC Column that will separate benzene from other components in the bulk sample being analyzed. The column used for validation studies was a Waters uBondapack C18, 30 cm x 3.9 mm.

3.3. A clarification kit to remove any particulates in the bulk if necessary.

3.4. A micro-distillation apparatus to distill any samples if necessary.

3.5. An electronic integrator or some other suitable method of measuring peak areas.

3.6. Microliter syringes—10 µL syringe and other convenient sizes for making standards. 10 µL syringe for sample injections.

3.7. Volumetric flasks, 5 mL and other convenient sizes for preparing standards and making dilutions.

4. Reagents.

4.1. Benzene, reagent grade.

4.2. HPLC grade water, methyl alcohol, and isopropyl alcohol.

5. Collection and shipment of samples.

5.1. Samples should be transported in glass containers with Teflon-lined caps.

5.2. Samples should not be put in the same container used for air samples.

6. Analysis of samples.

6.1. Sample preparation.

If necessary, the samples are distilled or clarified. Samples are analyzed undiluted. If the benzene concentration is out of the working range, suitable dilutions are made with isopropyl alcohol.

6.2. HPLC conditions.

The typical operating conditions for the high performance liquid chromatograph are:

1. Mobile phase—Methyl alcohol/water, 50/50

1. Analytical wavelength—254 nm

3. Injection size—10 µL

6.3. Measurement of peak area and calibration.

Peak areas are measured by an integrator or other suitable means. The integrator is calibrated to report results % in benzene by volume.

7. Calculations.

Since the integrator is programmed to report results in % benzene by volume in an undiluted sample, the following equation is used:

% Benzene by Volume=A x B

Where: A=% by volume on report

B=Dilution Factor

(B=1 for undiluted sample)

8. Backup Data.

8.1. Detection limit—Bulk Samples.

The detection limit for the analytical procedure for bulk samples is 0.88 µg, with a coefficient of variation of 0.019 at this level. This amount provided a chromatographic peak that could be identifiable in the presence of possible interferences. The detection limit date were obtained by making 10 µL injections of a 0.10% by volume standard.

Injection	Area Count	
1	45386	
2	44214	
3	43822	X̄=44040.1
4	44062	SD=852.5
6	42724	CV=0.019

8.2. Pooled coefficient of variation—Bulk Samples.

The pooled coefficient of variation for analytical procedure was determined by 50 µL replicate injections of analytical standards. The standards were 0.01, 0.02, 0.04, 0.10, 1.0, and 2.0% benzene by volume.

AREA COUNT (PERCENT)

Injection No.	0.01	0.02	0.04	0.10	1.0	2.0
1	45386	84737	166097	448497	4395380	9339150
2	44241	84300	170832	441299	4590800	9484900
3	43822	83835	164160	443719	4593200	9557580
4	44062	84381	164445	444842	4642350	9677060
5	44006	83012	168398	442564	4646430	9766240
6	42724	81957	173002	443975	4646260	.....
X̄ =	44040.1	83703.6	167872	444149	4585767	9564986
SD =	852.5	1042.2	3589.8	2459.1	96839.3	166233
CV =	0.0194	0.0125	0.0213	0.0055	0.0211	0.0174
C̄V̄ =	0.017					

Appendix E to § 1915.1028—Qualitative and Quantitative Fit Testing Procedures

I. Fit Test Protocols

A. The employer shall include the following provisions in the fit test procedures. These provisions apply to both qualitative fit testing (QLFT) and quantitative fit testing (QNFT).

1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers. The selection shall include at least three sizes of elastomeric facepieces of the type of respirator that is to be tested, i.e., three sizes of half mask; or three sizes of full facepiece; and units from at least two manufacturers.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a comfortable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning the respirator. This instruction may not constitute the subject's formal training on respirator use, at it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each facepiece up to the face and eliminate those which obviously do not give a comfortable fit.

5. The more comfortable facepieces are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in item 6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to ajust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

(a) Position of the mask on the nose.

(b) Room for eye protection.

(c) Room to talk.

(d) Position of mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

(a) Chin properly placed:

(b) Adequate strap tension, not overly tightened;

(c) Fit across nose bridge;

(d) Respirator of proper size to span distance from nose to chin;

(e) Tendency of respirator to slip;

(f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct the negative and positive pressure fit checks as described below or ANSI Z88.2–1980. Before conducting the negative or positive pressure test, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another

facepiece shall be selected and retested if the test subject fails the fit check tests.

(a) *Positive pressure test.* Close off the exhalation value and exhale gently onto the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation value cover before closing off the exhalation value and then carefully replacing it after the test.

(b) *Negative pressure test.* Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, or long sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory disease or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

11. The test subject shall be given the opportunity to wear the successfully fitted respirator for a period of two weeks. If at any time during this period the respirator becomes uncomfortable, the test subject shall be given the opportunity to select a different facepiece and to be retested.

12. The employer shall certify that a successful fit test has been administered to the employee. The certification shall include the following information:

(a) Name of employee;

(b) Type, brand and size of respirator; and

(c) Date of test.

Where QNFT is used, the fit factor, strip chart, or other recording of the results of the test, shall be retained with the certification. The certification shall be maintained until the next fit test is administered.

13. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

14. Test Exercises. The test subject shall perform exercises, in the test environment, in the manner described below:

(a) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(b) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as to not hyperventilate.

(c) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(d) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(e) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

(f) Grimace. The test subject shall grimace by smiling or frowning.

(g) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT units which prohibit bending at the waist.

(h) Normal breathing. Same as exercise 1.

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds.

The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become uncomfortable, another model of respirator shall be tried.

B. Qualitative Fit Test (QLFT) Protocols.

1. *General.*

(a) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator qualitative fit test program.

(b) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and assure that test equipment is in proper working order.

(c) The employer shall assure that QLFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. *Isoamyl Acetate Protocol.*

(a) Odor threshold screening.

The odor threshold screening test, performed without wearing a respirator, is intended to determine if the individual tested can detect the odor of isoamyl acetate.

(1) Three 1-liter glass jars with metal lids are required.

(2) Odor free water (e.g. distilled or spring water) at approximately 25° C shall be used for the solutions.

(3) The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1 liter jar and shaking for 30 seconds. A new solution shall be prepared at least weekly.

(4) The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but shall not be connected to the same recirculating ventilation system.

(5) The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor free water using a clean dropper or pipette. The solution shall be shaken for 30 seconds and allowed to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution shall be used for only one day.

(6) A test blank shall be prepared in a third jar by adding 500 cc of odor free water.

(7) The odor test and test blank jars shall be labeled 1 and 2 for jar identification. Labels shall be placed on the lids so they can be periodically peeled, dried off and switched to maintain the integrity of the test.

(8) The following instruction shall be typed on a card and placed on the table in front of the two test jars (i.e., 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

(9) The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

(10) If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test shall not be performed.

(11) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

(b) Isoamyl acetate fit test.

(1) The fit test chamber shall be similar to a clear 55-gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches (15.24 cm) above the test subject's head. The inside top center of the chamber shall have a small hook attached.

(2) Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or masks shall be changed at least weekly.

(3) After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

(4) A copy of the test exercises and any prepared text from which the subject is to read shall be taped to the inside of the test chamber.

(5) Upon entering the test chamber, the test subject shall be given a 6-inch by 5-inch (15.24 × 12.7 cm) piece of paper towel, or other porous, absorbent, single-ply material, folded in half and wetted with 0.75 cc of pure IAA. The test subject shall hand the wet towel on the hook at the top of the chamber.

(6) Allow two minutes for the IAA test concentration to stabilize before starting the fit test exercises. This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of his/her cooperation, and the purpose for the head exercises; or to demonstrate some of the exercises.

(7) If at any time during the test, the subject detects the banana like odor of IAA, the test has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

(8) If the test has failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber and again begin the procedure described in (1) through (7) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

(9) When a respirator is found that passes the test, its efficiency shall be demonstrated for the subject by having the subject break the face seal and take a breath before existing the chamber.

(10) When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the test area from becoming contaminated, the used towels shall be kept in a self sealing bag so there is no significant IAA concentration build-up in the test chamber during subsequent tests.

3. *Saccharin Solution Aerosol Protocol.*

The saccharin solution aerosol QLFT protocol is the only currently available, validated test protocol for use with particulate disposable dust respirators not equipped with high-efficiency filters. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste threshold screening.

The saccharin taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of saccharin.

(1) Threshold screening as well as fit testing subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches (30.48 cm) in diameter by 14 inches (35.56 cm) tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure shall have a ¾-inch (1.905 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his/her wide open mouth with tongue extended.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer the test conductor shall spray the *threshold check solution* into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The *threshold check solution* consists of 0.83 grams of sodium saccharin USP in 1 cc of warm water. It can be prepared by putting 1 cc of the fit test solution (see (b)(5) below) in 100 cc of distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then released and allowed to fully expand.

(7) Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the saccharin is not tasted after 30 squeezes (step 10), the test subject may not perform the saccharin fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Saccharin solution aerosol fit test procedure.

(1) The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure described in (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected in section (a) above. The respirator shall be properly adjusted and equipped with a particulate filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

(6) As before, the test subject shall breathe through the open mouth with tongue extended.

(7) The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure using the same number of squeezes required to elicit a taste response in the screening test.

(8) After generating the aerosol the test subject shall be instructed to perform the exercises in section I. A. 14 above.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes as initially.

(10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected.

(11) If the taste of saccharin is detected, the fit is deemed unsatisfactory and a different respirator shall be tried.

4. *Irritant Fume Protocol.*

(a) The respirator to be tested shall be equipped with high-efficiency particulate air (HEPA) filters.

(b) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its characteristic odor.

(c) Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part No. 5645, or equivalent. Attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute.

(d) Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep his/her eyes closed while the test is performed.

(e) The test conductor shall direct the stream of irritant smoke from the smoke tube towards the face seal area of the test subject. He/She shall begin at least 12 inches (30.48 cm) from the facepiece and gradually move to within one inch (2.54 cm), moving around the whole perimeter of the mask.

(f) The exercises identified in section I. A. 14 above shall be performed by the test subject while the respirator seal is being challenged by the smoke.

(g) Each test subject passing the smoke test without evidence of a response shall be given a sensitivity check of the smoke from the same tube once the respirator has been removed to determine whether he/she reacts to the smoke. Failure to evoke a response shall void the fit test.

(h) The fit test shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agent.

C. Quantiative Fit Test (QNFT) Protocol.

1. *General.*

(a) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator quantitative fit test program.

(b) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and assure that test equipment is in proper working order.

(c) The employer shall assure that QNFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. *Definitions.*

(a) Quantitative fit test. The test is performed in a test chamber. The normal air-purifying element of the respirator is replaced by a high-efficiency particulate air (HEPA) filter in the case of particulate QNFT aerosols or a sorbent offering contaminant penetration protection equivalent to high-efficiency filters where the QNFT test agent is a gas or vapor.

(b) Challenge agent means the aerosol, gas or vapor introduced into a test chamber so that its concentration inside and outside the respirator may be measured.

(c) Test subject means the person wearing the respirator for quantitative fit testing.

(d) Normal standing position means standing erect and straight with arms down along the sides and looking straight ahead.

(e) Maximum peak penetration method means the method of determining test agent penetration in the respirator as determined by strip chart recordings of the test. The highest peak penetration for a given exercise

is taken to be representative of average penetration into the respirator for that exercise.

(f) Average peak penetration method means the method of determining test agent penetration into the respirator utilizing a strip chart recorder, integrator, or computer. The agent penetration is determined by an average of the peak heights on the graph or by computer integration, for each exercise except the grimace exercise. Integrators or computers which calculate the actual test agent penetration into the respirator for each exercise will also be considered to meet the requirements of the average peak penetration method.

(g) "Fit Factor" means the ration of challenge agent concentration outside with respect to the inside of a respirator inlet covering (facepiece or enclosure).

3. *Apparatus.*

(a) Instrumentation. Aerosol generation, dilution, and measurement systems using corn oil or sodium chloride as test aerosols shall be used for quantitatives fit testing.

(b) Test chamber. The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without distrubing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air, yet uniform in concentration throughout the chamber.

(c) When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

(d) The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of the challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000. Integrators or computers which integrate the amount of test agent penetration leakage into the respirator for each exercise may be used provided a record of the readings is made.

(e) The combination of substitute air-purifying elements, challenge agent and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of an established exposure limit for the challenge agent at any time during the testing process.

(f) The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g. where the respirator is probed), a free air flow is allowed into the sampling line at all times and so that there is no interference with the fit or performance of the respirator.

(g) The test chamber and test set up shall permit the person administering the test to observe the test subject inside the chamber during the test.

(h) The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent inside the test chamber constant to within a 10 percent variation for the duration of the test.

(i) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event inside the test chamber and its being recorded.

(j) The sampling line tubing for the test chamber atmosphere and for the respirator sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.

(k) The exhaust flow from the test chamber shall pass through a high-efficiency filter before release.

(l) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

(m) The limitations of instrument detection shall be taken into account when determining the fit factor.

(n) Test respirators shall be maintained in proper working order and inspected for deficiencies such as cracks, missing valves and gaskets, etc.

4. *Procedural Requirements.*

(a) When performing the initial positive or negative pressure test the sampling line shall be crimped closed in order to avoid air pressure leakage during either of these tests.

(b) An abbreviated screening isoamyl acetate test or irritant fume test may be utilized in order to quickly identify poor fitting respirators which passed the positive and/or negative pressure test and thus reduce the amount of QNFT time. When performing a screening isoamyl acetate test, combination high-efficiency organic vapor cartridges/canisters shall be used.

(c) A reasonably stable challenge agent concentration shall be measured in the test chamber prior to testing. For canopy or shower curtain type of test units the determination of the challenge agent stability may be established after the test subject has entered the test environment.

(d) Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half mask or 1 percent for a full facepiece respirator.

(e) A stable challenge concentration shall be obtained prior to the actual start of testing.

(f) Respirator restraining straps shall not be overtightened for testing. The straps shall be adjusted by the wearer without assistance from other persons to give a reasonable comfortable fit typical of normal use.

(g) The test shall be terminated whenever any single peak penetration exceeds 5 percent for half masks and 1 percent for full facepiece respirators. The test subject shall be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed inadequate.

(h) In order to successfully complete a QNFT, three successful fit tests are required. The results of each of the three independent fit tests must exceed the minimum fit factor needed for the class of respirator (e.g. half mask respirator, full facepiece respirator).

(i) Calculation of fit factors.

(1) The fit factor shall be determined for the quantitative fit test by taking the ratio of the average chamber concentration to the concentration inside the respirator.

(2) The average test chamber concentration is the arithmetic average of the test chamber concentration at the beginning and of the end of the test.

(3) The concentration of the challenge agent inside the respirator shall be determined by one of the following methods:

(i) Average peak concentration.

(ii) Maximum peak concentration.

(iii) Integration by calculation of the area under the individual peak for each exercise. This includes computerized integration.

(j) Interpretation of test results. The fit factor established by the quantitative fit testing shall be the lowest of the three fit factor values calculated from the three required fit tests.

(k) The test subject shall not be permitted to wear a half mask, or full facepiece respirator unless a minimum fit factor equivalent to at least 10 times the hazardous exposure level is obtained.

(l) Filters used for quantitative fit testing shall be replaced at least weekly, or whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily (when used) or sooner if there is any indication of breakthrough by a test agent.

§ 1915.1030 Bloodborne pathogens.

(a) *Scope and Application.* This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

(b) *Definitions.* For purposes of this section, the following shall apply:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination means the use of physical or chemical means to remove, inactivate, or destroy bloodborne

pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials means

(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

(c) *Exposure control*—(1) *Exposure Control Plan.* (i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

(ii) The Exposure Control Plan shall contain at least the following elements:

(A) The exposure determination required by paragraph(c)(2),

(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1915.1120(e).

(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

(v) The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

(2) *Exposure determination.* (i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;

(B) A list of job classifications in which some employees have occupational exposure, and

(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

(d) *Methods of compliance*—(1) *General*—Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

(2) *Engineering and work practice controls.* (i) Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

(ii) Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

(iii) Employers shall provide handwashing facilities which are readily accessible to employees.

(iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

(v) Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

(vi) Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

(vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

(A) Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

(B) Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

(viii) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

(A) Puncture resistant;

(B) Labeled or color-coded in accordance with this standard;

(C) Leakproof on the sides and bottom; and

(D) In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

(ix) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

(x) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

(xi) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

(xii) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

(xiii) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

(A) The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

(B) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

(C) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

(xiv) Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

(B) The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

(3) *Personal protective equipment*—(i) *Provision.* When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

(ii) *Use.* The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurences in the future.

(iii) *Accessibility.* The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

(iv) *Cleaning, laundering, and disposal.* The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(v) *Repair and replacement.* The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

(vi) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(vii) All personal protective equipment shall be removed prior to leaving the work area.

(viii) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

(ix) *Gloves.* Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

(A) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(C) Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

(D) If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

(*1*) Periodically reevaluate this policy;

(*2*) Make gloves available to all employees who wish to use them for phlebotomy;

(*3*) Not discourage the use of gloves for phlebotomy; and

(*4*) Require that gloves be used for phlebotomy in the following circumstances:

(*i*) When the employee has cuts, scratches, or other breaks in his or her skin;

(*ii*) When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

(*iii*) When the employee is receiving training in phlebotomy.

(x) *Masks, eye protection, and face shields.* Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

(xi) *Gowns, aprons, and other protective body clothing.* Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

(xii) Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

(4) *Housekeeping*—(i) *General.* Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

(B) Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

(E) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

(iii) *Regulated waste*—(A) *Contaminated sharps discarding and containment.* (*1*) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(*i*) Closable;

(*ii*) Puncture resistant;

(*iii*) Leakproof on sides and bottom; and

(*iv*) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

(*2*) During use, containers for contaminated sharps shall be:

(*i*) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

(*ii*) Maintained upright throughout use; and

(*iii*) Replaced routinely and not be allowed to overfill.

(*3*) When moving containers of contaminated sharps from the area of use, the containers shall be:

(*i*) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

(*ii*) Placed in a secondary container if leakage is possible. The second container shall be:

(*A*) Closable;

(*B*) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

(*C*) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

(*4*) Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

(B) *Other regulated waste containment.* (*1*) Regulated waste shall be placed in containers which are:

(*i*) Closable;

(*ii*) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(*iii*) Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

(*iv*) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

(*i*) Closable;

(*ii*) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(*iii*) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

(*iv*) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(iv) *Laundry.* (A) Contaminated laundry shall be handled as little as possible with a minimum of agitation.

(1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(3) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

(e) *HIV and HBV Research Laboratories and Production Facilities.* (1) This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

(2) Research laboratories and production facilities shall meet the following criteria:

(i) *Standard microbiological practices.* All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(ii) *Special practices.* (A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(C) Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

(D) When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

(E) All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

(F) Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

(G) Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

(H) Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(I) Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

(J) Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(M) A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

(iii) *Containment equipment.* (A) Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

(B) Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

(3) HIV and HBV research laboratories shall meet the following criteria:

(i) Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

(ii) An autoclave for decontamination of regulated waste shall be available.

(4) HIV and HBV production facilities shall meet the following criteria:

(i) The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

(ii) The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

(iii) Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

(iv) Access doors to the work area or containment module shall be self-closing.

(v) An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

(vi) A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

(5) *Training requirements.* Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

(f) *Hepatitis B vaccination and post-exposure evaluation and follow-up—(1) General.* (i) The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(ii) The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(A) Made available at no cost to the employee;

(B) Made available to the employee at a reasonable time and place;

(C) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

(2) *Hepatitis B vaccination.* (i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

(iii) If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

(iv) The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in appendix A.

(v) If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

(3) *Post-exposure evaluation and follow-up.* Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

(i) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

(ii) Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

(A) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

(B) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

(C) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

(iii) Collection and testing of blood for HBV and HIV serological status;

(A) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

(B) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

(iv) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

(v) Counseling; and

(vi) Evaluation of reported illnesses.

(4) *Information provided to the healthcare professional.* (i) The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

(A) A copy of this regulation;

(B) A description of the exposed employee's duties as they relate to the exposure incident;

(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

(D) Results of the source individual's blood testing, if available; and

(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

(5) *Healthcare professional's written opinion.* The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(i) The healthcare professional's written opinion for Hepatitis B

vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

(ii) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

(A) That the employee has been informed of the results of the evaluation; and

(B) That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

(iii) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(6) *Medical recordkeeping.* Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

(g) *Communication of hazards to employees*— (1) *Labels and signs*—(i) *Labels.* (A) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(B) Labels required by this section shall include the following legend:

BIOHAZARD

(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

(D) Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(E) Red bags or red containers may be substituted for labels.

(F) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

(G) Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

(H) Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

(ii) *Signs.* (A) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

BIOHAZARD

(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)

(B) These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

(2) *Information and training.* (i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place;

(B) Within 90 days after the effective date of the standard; and

(C) At least annually thereafter.

(iii) For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

(vii) The training program shall contain at a minimum the following elements:

(A) An accessible copy of the regulatory text of this standard and an explanation of its contents;

(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;

(C) An explanation of the modes of transmission of bloodborne pathogens;

(D) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

(E) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

(F) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

(G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

(H) An explanation of the basis for selection of personal protective equipment;

(I) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

(J) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

(K) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

(L) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

(M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

(N) An opportunity for interactive questions and answers with the person conducting the training session.

(viii) The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

(ix) Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(C) The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) *Recordkeeping*—(1) *Medical Records.* (i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1915.1120.

(ii) This record shall include:

(A) The name and social security number of the employee;

(B) A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

(E) A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

(iii) Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:

(A) Kept confidential; and

(B) Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1915.1120.

(2) *Training records.* (i) Training records shall include the following information:

(A) The dates of the training sessions;

(B) The contents or a summary of the training sessions;

(C) The names and qualifications of persons conducting the training; and

(D) The names and job titles of all persons attending the training sessions.

(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

(3) *Availability.* (i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1915.1120.

(4) *Transfer of Records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(i) *Dates*—(1) *Effective date.* The standard shall become effective on March 6, 1992.

(2) The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g) (1) Labels and Signs, shall take effect July 6, 1992.

Appendix A to § 1915.1030—Hepatitis B Vaccine Declination (Mandatory)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

(Apporved by the Office of Management and Budget under control number 1218–0180)

§ 1915.1044 1,2-dibromo-3-chloropropane.

(a) *Scope and application.* (1) This section applies to occupational exposure to 1,2-dibromo-3-chloropropane (DBCP).

(2) This section does not apply to:

(i) Exposure to DBCP which results solely from the application and use of DBCP as a pesticide; or

(ii) The storage, transportation, distribution or sale of DBCP in intact containers sealed in such a manner as to prevent exposure to DBCP vapors or liquid, except for the requirements of paragraphs (i), (n) and (o) of this section.

(b) *Definitions. Authorized person* means any person required by his duties to be present in regulated areas and authorized to do so by his employer, by this section, or by the Act. *Authorized person* also includes any person entering such areas as a designated representative of employees exercising an opportunity to observe employee exposure monitoring.

DBCP means 1,2-dibromo-3-chloropropane, Chemical Abstracts Service Registry Number 96–12–8, and includes all forms of DBCP.

Director means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to equipment failure, rupture of containers, or failure of control equipment which may, or does, result in an unexpected release of DBCP.

OSHA Area Office means the Area Office of the Occupational Safety and Health Administration having jurisdiction over the geographic area where the affected workplace is located.

Assistant Secretary means the Assistant Secretary of Labor for

Occupational Safety and Health, U.S. Department of Labor, or designee.

(c) *Permissible exposure limit*—(1) *Inhalation.* The employer shall assure that no employee is exposed to an airborne concentration of DBCP in excess of 1 part DBCP per billion parts of air (ppb) as an 8-hour time-weighted average.

(2) *Dermal and eye exposure.* The employer shall assure that no employee is exposed to eye or skin contact with DBCP.

(d) *Notification of use.* Within ten (10) days following the introduction of DBCP into the workplace, every employer who has a workplace where DBCP is present, shall report the following information to the nearest OSHA Area Office for each such workplace;

(1) The address and location of the workplace:

(2) A brief description of each process or operation which may result in employee exposure to DBCP;

(3) The number of employees engaged in each process or operation who may be exposed to DBCP and an estimate of the frequency and degree of exposure that occurs; and

(4) A brief description of the employer's safety and health program as it relates to limitation of employee exposure to DBCP.

(e) *Regulated areas.* (1) The employer shall establish, within each place of employment, regulated areas wherever DBCP concentrations are in excess of the permissible exposure limit.

(2) The employer shall limit access to regulated areas to authorized persons.

(f) *Exposure monitoring*—(1) *General.* (i) Determinations of airborne exposure levels shall be made from air samples that are representative of each employee's exposure to DBCP over an 8-hour period.

(ii) For the purposes of this paragraph, employee exposure is that exposure which would occur if the employee were not using a respirator.

(2) *Initial.* Each employer who has a place of employment in which DBCP is present, shall monitor each workplace and work operation to accurately determine the airborne concentrations of DBCP to which employees may be exposed.

(3) *Frequency.* (i) If the monitoring required by this section reveals employee exposures to be below the permissible exposure limit, the employer shall repeat these measurements at least quarterly.

(ii) If the monitoring required by this section reveals employee exposures to be in excess of the permissible exposure limit, the employer shall repeat these measurements for each such employee at least monthly. The employer shall continue monthly monitoring until at least two consecutive measurements, taken at least seven (7) days apart, are below the permissible exposure limit. Thereafter the employer shall monitor at least quarterly.

(4) *Additional.* Whenever there has been a production, process, control, or personnel change which may result in any new or additional exposure to DBCP, or whenever the employer has any reason to suspect new or additional exposures to DBCP, the employer shall monitor the employees potentially affected by such change for the purpose of redetermining their exposure.

(5) *Employee notification.* (i) Within five (5) working days after the receipt of monitoring results, the employer shall notify each employee in writing of the measurements which represent the employee's exposure.

(ii) Whenever the results indicate that employee exposure exceeds the permissible exposure limit, the employer shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action being taken to reduce exposure to or below the permissible exposure limit.

(6) *Accuracy of measurement.* The employer shall use a method of measurement which has an accuracy, to a confidence level of 95 percent, of not less than plus or minus 25 percent for concentrations of DBCP at or above the permissible exposure limit.

(g) *Methods of compliance*—(1) *Priority of compliance methods.* The employer shall institute engineering and work practice controls to reduce and maintain employee exposures to DBCP at or below the permissible exposure limit, except to the extent that the employer establishes that such controls are not feasible. Where feasible engineering and work practice controls are not sufficient to reduce employee exposures to within the permissible exposure limit, the employer shall nonetheless use them to reduce exposures to the lowest level achievable by these controls, and shall supplement them by use of respiratory protection.

(2) *Compliance program.* (i) The employer shall establish and implement a written program to reduce employee exposures to DBCP to or below the permissible exposure limit solely by means of engineering and work practice controls as required by paragraph (g)(1) of this section.

(ii) The written program shall include a detailed schedule for development and implementation of the engineering and work practice controls. These plans shall be revised at least every six months to reflect the current status of the program.

(iii) Written plans for these compliance programs shall be submitted upon request to the Assistant Secretary and the Director, and shall be available at the worksite for examination and copying by the Assistant Secretary, the Director, and any affected employee or designated representative of employees.

(iv) The employer shall institute and maintain at least the controls described in his most recent written compliance program.

(h) *Respirators*—(1) *General.* Where respiratory protection is required under this section, the employer shall select, provide and assure the proper use of respirators. Respirators shall be used in the following circumstances:

(i) During the period necessary to install or implement feasible engineering and work practice controls; or

(ii) During maintenance and repair activities in which engineering and work practice controls are not feasible; or

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the permissible exposure limit; or

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator from Table 1 below and shall assure that the employee uses the respirator provided.

(ii) The employer shall select respirators from among those approved by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

TABLE 1—RESPIRATORY PROTECTION FOR DBCP

Airborne concentration of DBCP or condition of use	Respirator type
(a) Less than or equal to 10 ppb.	(1) Any supplied-air respirator; or (2) any self-contained breathing apparatus.
(b) Less than or equal to 50 ppb.	(1) Any supplied-air respirator with full facepiece, helmet, or hood; or (2) any self-contained breathing apparatus with full facepiece.

TABLE 1—RESPIRATORY PROTECTION FOR DBCP—Continued

Airborne concentration of DBCP or condition of use	Respirator type
(c) Less than or equal to 1,000 ppb.	(1) A Type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous flow mode.
(d) Less than or equal to 2,000 ppb.	(1) A Type C supplied-air respirator with full facepiece operated in pressure-demand or other positive pressure mode, or with full facepiece, helmet, or hood operated in continuous flow mode.
(e) Greater than 2,000 ppb or entry and escape from unknown concentrations.	(1) A combination respirator which includes a Type C supplied-air respirator with full facepiece operated in pressure-demand or other positive pressure or continuous flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or positive pressure mode; or (2) a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.
(f) Firefighting	(1) A self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

(3) *Respirator program.* (i) The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e), and (f).

(ii) Employees who wear respirators shall be allowed to wash their faces and respirator facepieces as needed to prevent potential skin irritation associated with respirator use.

(i) *Emergency situations*—(1) *Written plans.* (i) A written plan for emergency situations shall be developed for each workplace in which DBCP is present.

(ii) Appropriate portions of the plan shall be implemented in the event of an emergency.

(2) Employees engaged in correcting emergency conditions shall be equipped as required in paragraphs (h) and (j) of this section until the emergency is abated.

(3) *Evacuation.* Employees not engaged in correcting the emergency shall be removed and restricted from the area and normal operations in the affected area shall not be resumed until the emergency is abated.

(4) *Alerting employees.* Where there is a possibility of employee exposure to DBCP due to the occurrence of an emergency, a general alarm shall be installed and maintained to promptly alert employees of such occurrences.

(5) *Medical surveillance.* For any employee exposed to DBCP in an emergency situation, the employer shall provide medical surveillance in accordance with paragraph (m)(6) of this section.

(6) *Exposure monitoring.* (i) Following an emergency, the employer shall conduct monitoring which complies with paragraph (f) of this section.

(ii) In workplaces not normally subject to periodic monitoring, the employer may terminate monitoring when two consecutive measurements indicate exposures below the permissible exposure limit.

(j) *Protective clothing and equipments*—(1) *Provision and use.* Where there is any possibility of eye or dermal contact with liquid or solid DBCP, the employer shall provide, at no cost to the employee, and assure that the employee wears impermeable protective clothing and equipment to protect the area of the body which may come in contact with DBCP. Eye and face protection shall meet the requirements of § 1910.133 of this title.

(2) *Removal and storage.* (i) The employer shall assure that employees remove DBCP contaminated work clothing only in change rooms provided in accordance with paragraph (l) (1) of this section.

(ii) The employer shall assure that employees promptly remove any protective clothing and equipment which becomes contaminated with DBCP-containing liquids and solids. This clothing shall not be reworn until the DBCP has been removed from the clothing or equipment.

(iii) The employer shall assure that no employee takes DBCP contaminated protective devices and work clothing out of the change room, except those employees authorized to do so for the purpose of laundering, maintenance, of disposal.

(iv) DBCP-contaminated protective devices and work clothing shall be placed and stored in closed containers which prevent dispersion of the DBCP outside the container.

(v) Containers of DBCP contaminated protective devices or work clothing which are to be taken out of change rooms or the workplace for cleaning, maintenance or disposal, shall bear labels in accordance with paragraph (o)(3) of this section.

(3) *Cleaning and replacement.* (i) The employer shall clean, launder, repair, or replace protective clothing and equipment required by this paragraph to maintain their effectiveness. The employer shall provide clean protective clothing and equipment at least daily to each affected employee.

(ii) The employer shall inform any person who launders or clean DBCP-contaminated protective clothing or equipment of the potentially harmful effects of exposure to DBCP.

(iii) The employer shall prohibit the removal of DBCP from protective clothing and equipment by blowing or shaking.

(k) *Housekeeping*—(1) *Surfaces.* (i) All workplace surfaces shall be maintained free of visible accumulations of DBCP.

(ii) Dry sweeping and the use of compressed air for the cleaning of floors and other surfaces is prohibited where DBCP dusts or liquids are present.

(iii) Where vacuuming methods are selected to clean floors and other surfaces, either portable units or a permanent system may be used.

(A) If a portable unit is selected, the exhaust shall be attached to the general workplace exhaust ventilation system or collected within the vacuum unit, equipped with high efficiency filters or other appropriate means of contaminant removal, so that DBCP is not reintroduced into the workplace air; and

(B) Portable vacuum units used to collect DBCP may not be used for other cleaning purposes and shall be labeled as prescribed by paragraph (o)(3) of this section.

(iv) Cleaning of floors and other surfaces contaminated with DBCP-containing dusts shall not be performed by washing down with a hose, unless a fine spray has first been laid down.

(2) *Liquids.* Where DBCP is present in a liquid form, or as a resultant vapor, all containers or vessels containing DBCP shall be enclosed to the maximum extent feasible and tightly covered when not in use.

(3) *Waste disposal.* DBCP waste scrap, debris, containers or equipment, shall be disposed of in sealed bags or other closed containers which prevent dispersion of DBCP outside the container.

(l) *Hygiene facilities and practices*—(1) *Change rooms.* The employer shall provide clean change rooms equipped with storage facilities for street clothes and separate storage facilities for protective clothing and equipment whenever employees are required to wear protective clothing and equipment

in accordance with paragraphs (h) and (j) of this section.

(2) *Showers.* (i) The employer shall assure that employees working in the regulated area shower at the end of the work shift.

(ii) The employer shall assure that employees whose skin becomes contaminated with DBCP-containing liquids or solids immediately wash or shower to remove any DBCP from the skin.

(iii) The employer shall provide shower facilities in accordance with 29 CFR 1910.141(d)(3).

(3) *Lunchrooms.* The employer shall provide lunchroom facilities which have a temperature controlled, positive pressure, filtered air supply, and which are readily accessible to employees working in regulated areas.

(4) *Lavatories.* (i) The employer shall assure that employees working in the regulated area remove protective clothing and wash their hands and face prior to eating.

(ii) The employer shall provide a sufficient number of lavatory facilities which comply with 29 CFR 1910.141(d)(1) and (2).

(5) *Prohibition of activities in regulated areas.* The employer shall assure that, in regulated areas, food or beverages are not present or consumed, smoking products and implements are not present or used, and cosmetics are not present or applied.

(m) *Medical surveillance*—(1) *General.* (i) The employer shall make available a medical surveillance program for employees who work in regulated areas and employees who are subjected to DBCP exposures in an emergency situation.

(ii) All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee.

(2) *Frequency and content.* At the time of initial assignment, and annually thereafter, the employer shall provide a medical examination for employees who work in regulated areas, which includes at least the following:

(i) A medical and occupational history including reproductive history.

(ii) A physical examination, including examination of the genito-urinary tract, testicle size and body habitus, including a determination of sperm count.

(iii) A serum specimen shall be obtained and the following determinations made by radioimmunoassay techniques utilizing National Institutes of Health (NIH) specific antigen or one of equivalent sensitivity:

(A) Serum follicle stimulating hormone (FSH);

(B) Serum luteinizing hormone (LH); and

(C) Serum total estrogen (females).

(iv) Any other tests deemed appropriate by the examining physician.

(3) *Additional examinations.* If the employee for any reason develops signs or symptoms commonly associated with exposure to DBCP, the employer shall provide the employee with a medical examination which shall include those elements considered appropriate by the examining physician.

(4) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this regulation and its appendices;

(ii) A description of the affected employee's duties as they relate to the employee's exposure;

(iii) The level of DBCP to which the employee is exposed; and

(iv) A description of any personal protective equipment used or to be used.

(5) *Physician's written opinion.* (i) For each examination under this section, the employer shall obtain and provide the employee with a written opinion from the examining physician which shall include:

(A) The results of the medical tests performed;

(B) The physician's opinion as to whether the employee has any detected medical condition which would place the employee at an increased risk of material impairment of health from exposure to DBCP; and

(C) Any recommended limitations upon the employee's exposure to DBCP or upon the use of protective clothing and equipment such as respirators.

(ii) The employer shall instruct the physician not to reveal in the written opinion specific findings or diagnoses unrelated to occupational exposure.

(6) *Emergency situations.* If the employee is exposed to DBCP in an emergency situation, the employer shall provide the employee with a sperm count test as soon as practicable, or, if the employee has been vasectionized or is unable to produce a semen specimen, the hormone tests contained in paragraph (m)(2)(iii) of this section. The employer shall provide these same tests three months later.

(n) *Employee information and training*—(1) *Training program.* (i) The employer shall institute a training program for all employees who may be exposed to DBCP and shall assure their participation in such training program.

(ii) The employer shall assure that each employee is informed of the following:

(A) The information contained in Appendix A;

(B) The quantity, location, manner of use, release or storage of DBCP and the specific nature of operations which could result in exposure to DBCP as well as any necessary protective steps;

(C) The purpose, proper use, and limitations of respirators;

(D) The purpose and description of the medical surveillance program required by paragraph (m) of this section; and

(E) A review of this standard, including appendices.

(2) *Access to training materials.* (i) The employer shall make a copy of this standard and its appendices readily available to all affected employees.

(ii) The employer shall provide, upon request, all materials relating to the employee information and training program to the Assistant Secretary and the Director.

(o) *Signs and labels*—(1) *General.* (i) The employer may use labels or signs required by other statutes, regulations, or ordinances in addition to or in combination with, signs and labels required by this paragraph.

(ii) The employer shall assure that no statement appears on or near any sign or label required by this paragraph which contradicts or detracts from the required sign or label.

(2) *Signs.* (i) The employer shall post signs to clearly indicate all regulated areas. These signs shall bear the legend:

DANGER

1,2-Dibromo-3-chloropropane

(Insert appropriate trade or common names)

CANCER HAZARD

AUTHORIZED PERSONNEL ONLY

RESPIRATOR REQUIRED

(3) *Labels.* (i) The employer shall assure that precautionary labels are affixed to all containers of DBCP and of products containing DBCP in the workplace, and that the labels remain affixed when the DBCP or products containing DBCP are sold, distributed, or otherwise leave the employer's workplace. Where DBCP or products containing DBCP are sold, distributed or otherwise leave the employer's workplace bearing appropriate labels required by EPA under the regulations in 40 CFR part 162, the labels required by this paragraph need not be affixed.

(ii) The employer shall assure that the precautionary labels required by this paragraph are readily visible and legible. The labels shall bear the following legend:

DANGER
1,2-Dibromo-3-chloropropane
CANCER HAZARD

(p) *Recordkeeping*—(1) *Exposure monitoring.* (i) The employer shall establish and maintain an accurate record of all monitoring required by paragraph (f) of this section.

(ii) This record shall include:

(A) The dates, number, duration and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure;

(B) A description of the sampling and analytical methods used;

(C) Type of respiratory protective devices worn, if any; and

(D) Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent.

(iii) The employer shall maintain this record for at least 40 years or the duration of employment plus 20 years, whichever is longer.

(2) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance required by paragraph (m) of this section.

(ii) This record shall include:

(A) The name and social security number of the employee;

(B) A copy of the physician's written opinion;

(C) Any employee medical complaints related to exposure to DBCP;

(D) A copy of the information provided the physician as required by paragraphs (m)(4)(ii) through (m)(4)(iv) of this section; and

(E) A copy of the employee's medical and work history.

(iii) The employer shall maintain this record for at least 40 years or the duration of employment plus 20 years, whichever is longer.

(3) *Availability.* (i) The employer shall assure that all records required to be maintained by this section be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee exposure monitoring records and employee medical records required by this paragraph shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a) through (e) and (g) through (i).

(4) *Transfer of records.* (i) If the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by paragraph (p) of this section for the prescribed period.

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall transmit these records by mail to the Director.

(iii) At the expiration of the retention period for the records required to be maintained under paragraph (p) of this section, the employer shall transmit these records by mail to the Director.

(iv) The employer shall also comply with any additional requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(q) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees, or their designated representatives, with an opportunity to observe any monitoring of employee exposure to DBCP required by this section.

(2) *Observation procedures.* (i) Whenever observation of the measuring or monitoring of employee exposure to DBCP requires entry into an area where the use of protective clothing or equipment is required, the employer shall provide the observer with personal protective clothing or equipment required to be worn by employees working in the area, assure the use of such clothing and equipment, and require the observer to comply with all other applicable safety and health procedures.

(ii) Without interfering with the monitoring or measurement, observers shall be entitled to:

(A) Receive an explanation of the measurement procedures;

(B) Observe all steps related to the measurement of airborne concentrations of DBCP performed at the place of exposure; and

(C) Record the results obtained.

(r) *Appendices.* The information contained in the appendices is not intended, by itself, to create any additional obligations not otherwise imposed or to detract from any existing obligation.

(Approved by the Office of Management and Budget under control number 1218–0101)

Appendix A to § 1915.1044—Substance Safety Data Sheet For DBCP

I. Substance Identification

A. Synonyms and trades names: DBCP; Dibromochloropropane; Fumazone (Dow Chemical Company TM); Nemafume; Nemagon (Shell Chemical Co. TM); Nemaset; BBC 12; and OS 1879.

B. Permissible exposure:

1. *Airborne.* 1 part DBCP vapor per billion parts of air (1 ppb); time-weighted average (TWA) for an 8-hour workday.

2. *Dermal.* Eye contact and skin contact with DBCP are prohibited.

C. Appearance and odor: Technical grade DBCP is a dense yellow or amber liquid with a pungent odor. It may also appear in granular form, or blended in varying concentrations with other liquids.

D. Uses: DBCP is used to control nematodes, very small worm-like plant parasites, on crops including cotton, soybeans, fruits, nuts, vegetables and ornamentals.

II. Health Hazard Data

A. Routes of entry: Employees may be exposed:

1. Through inhalation (breathing);
2. Through ingestion (swallowing);
3. Skin contact; and
4. Eye contact.

B. Effects of exposure:

1. *Acute exposure.* DBCP may cause drowsiness, irritation of the eyes, nose, throat and skin, nausea and vomiting. In addition, overexposure may cause damage to the lungs, liver or kidneys.

2. *Chronic exposure.* Prolonged or repeated exposure to DBCP has been shown to cause sterility in humans. It also has been shown to produce cancer and sterility in laboratory animals and has been determined to constitute an increased risk of cancer in man.

3. *Reporting Signs and Symptoms.* If you develop any of the above signs or symptoms that you think are caused by exposure to DBCP, you should inform your employer.

III. Emergency First Aid Procedures

A. *Eye exposure.* If DBCP liquid or dust containing DBCP gets into your eyes, wash your eyes immediately with large amounts of water, lifting the lower and upper lids occasionally. Get medical attention immediately. Contact lenses should not be worn when working with DBCP.

B. *Skin exposure.* If DBCP liquids or dusts containing DBCP get on your skin, immediately wash using soap or mild detergent and water. If DBCP liquids or dusts containing DBCP penetrate through your clothing, remove the clothing immediately and wash. If irritation is present after washing get medical attention.

C. *Breathing.* If you or any person breathe in large amounts of DBCP, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Do not use mouth-to-mouth. Keep the affected person warm and at rest. Get medical attention as soon as possible.

D. *Swallowing.* When DBCP has been swallowed and the person is conscious, give the person large amounts of water immediately. After the water has been swallowed, try to get the person to vomit by having him touch the back of his throat with his finger. Do not make an unconscious person vomit. Get medical attention immediately.

E. *Rescue.* Notify someone. Put into effect the established emergency rescue procedures. Know the locations of the emergency rescue equipment before the need arises.

IV. Respirators and Protective Clothing

A. *Respirators.* You may be required to wear a respirator in emergencies and while your employer is in the process of reducing DBCP exposures through engineering

controls. If respirators are worn, they must have a National Institute for Occupational Safety and Health (NIOSH) approval label (Older respirators may have a Bureau of Mines Approval label). For effective protection, a respirator must fit your face and head snugly. The respirator should not be loosened or removed in work situations where its use is required. DBCP does not have a detectable odor except at 1,000 times or more above the permissible exposure limit. If you can smell DBCP while wearing a respirator, the respirator is not working correctly; go immediately to fresh air. If you experience difficulty breathing while wearing a respirator, tell your employer.

B. *Protective clothing.* When working with DBCP you must wear for your protection impermeable work clothing provided by your employer. (Standard rubber and neoprene protective clothing do not offer adequate protection).

DBCP must never be allowed to remain on the skin. Clothing and shoes must not be allowed to become contaminated with DBCP, and if they do, they must be promptly removed and not worn again until completely free of DBCP. Turn in impermeable clothing that has developed leaks for repair or replacement.

C. *Eye protection.* You must wear splash-proof safety goggles where there is any possibility of DBCP liquid or dust contacting your eyes.

V. Precautions for Safe Use, Handling, and Storage

A. DBCP must be stored in tightly closed containers in a cool, well-ventilated area.

B. If your work clothing may have become contaminated with DBCP, or liquids or dusts containing DBCP, you must change into uncontaminated clothing before leaving the work premises.

C. You must promptly remove any protective clothing that becomes contaminated with DBCP. This clothing must not be reworn until the DBCP is removed from the clothing.

D. If your skin becomes contaminated with DBCP, you must immediately and thoroughly wash or shower with soap or mild detergent and water to remove any DBCP from your skin.

E. You must not keep food, beverages, cosmetics, or smoking materials, nor eat or smoke, in regulated areas.

F. If you work in a regulated area, you must wash your hands thoroughly with soap or mild detergent and water, before eating, smoking or using toilet facilities.

G. If you work in a regulated area, you must remove any protective equipment or clothing before leaving the regulated area.

H. Ask your supervisor where DBCP is used in your work area and for any additional safety and health rules.

VI. Access to Information

A. Each year, your employer is required to inform you of the information contained in this Substance Safety Data Sheet for DBCP. In addition, your employer must instruct you in the safe use of DBCP, emergency procedures, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to DBCP. You or your representative have the right to observe employee exposure measurements and to record the result obtained. Your employer is required to inform you of your exposure. If your employer determines that you are being overexposed, he is required to inform you of the actions which are being taken to reduce your exposure.

C. Your employer is required to keep records of your exposure and medical examinations. Your employer is required to keep exposure and medical data for at least 40 years or the duration of your employment plus 20 years, whichever is longer.

D. Your employer is required to release exposure and medical records to you, your physician, or other individual designated by you upon your written request.

Appendix B to § 1915.1044—Substance Technical Guidelines for DBCP

I. Physical and Chemical Data

A. Substance Identification

1. Synonyms: 1,2-dibromo-3-chloropropane; DBCP, Fumazone; Nemafume; Nemagon; Nemaset; BBC 12; OS 1879. DBCP is also included in agricultural pesticides and fumigants which include the phrase "Nema———" in their name.

2. Formula: $C_3H_5Br_2$ C1.

3. Molecular Weight: 236.

B. Physical Data:

1. Boiling point (760 mm HG): 195 C (383 F)

2. Specific gravity (water=1): 2.093.

3. Vapor density (air=1 at boiling point of DBCP): Data not available.

4. Melting point: 6C (43 F).

5. Vapor pressure at 20C (68 F): 0.8 mm Hg

6. Solubility in water: 1000 ppm.

7. Evaporation rate (Butyl Acetate=1): very much less than 1.

8. Appearance and odor: Dense yellow or amber liquid with a pungent odor at high concentrations. Any detectable odor of DBCP indicates overexposure.

II. Fire Explosion and Reactivity Hazard Data

A. Fire

1. Flash point: 170 F (77 C)

2. Autoignition temperature: Data not available.

3. Flammable limits in air, percent by volume: Data not available.

4. Extinguishing media: Carbon dioxide, dry chemical.

5. Special fire-fighting procedures: Do not use a solid stream of water since a stream will scatter and spread the fire. Use water spray to cool containers exposed to a fire.

6. Unusual fire and explosion hazards: None known.

7. For purposes of complying with the requirements of § 1910.106, liquid DBCP is classified as a Class III A combustible liquid.

8. For the purpose of complying with § 1910.309, the classification of hazardous locations as described in article 500 of the National Electrical Code for DBCP shall be Class I, Group D.

9. For the purpose of compliance with § 1910.157, DBCP is classified as a Class B fire hazard.

10. For the purpose of compliance with § 1910.178, locations classified as hazardous locations due to the presence of DBCP shall be Class I, Group D.

11. Sources of ignition are prohibited where DBCP presents a fire or explosion hazard.

B. Reactivity

1. Conditions contributing to instability: None known.

2. Incompatibilities: Reacts with chemically active metals, such as aluminum, magnesium and tin alloys.

3. Hazardous decomposition products: Toxic gases and vapors (such as HBr, HCl and carbon monoxide) may be released in a fire involving DBCP.

4. Special precautions: DBCP will attack some rubber materials and coatings.

III. Spill, Leak and Disposal Procedures

A. If DBCP is spilled or leaked, the following steps should be taken:

1. The area should be evacuated at once and re-entered only after thorough ventilation.

2. Ventilate area of spill or leak.

3. If in liquid form, collect for reclamation or absorb in paper, vermiculite, dry sand, earth or similar material.

4. If in solid form, collect spilled material in the most convenient and safe manner for reclamation or for disposal.

B. Persons not wearing protective equipment must be restricted from areas of spills or leaks until cleanup has been completed.

C. Waste Disposal Methods:

1. For small quantities of liquid DBCP, absorb on paper towels, remove to a safe place (such as a fume hood) and burn the paper. Large quantities can be reclaimed or collected and atomized in a suitable combustion chamber equipped with an appropriate effluent gas cleaning device. If liquid DBCP is absorbed in vermiculite, dry sand, earth or similar material and placed in sealed containers it may be disposed of in a State-approved sanitary landfill.

2. If in solid form, for small quantities, place on paper towels, remove to a safe place (such as a fume hood) and burn. Large quantities may be reclaimed. However, if this is not practical, dissolve in a flammable solvent (such as alcohol) and atomize in a suitable combustion chamber equipped with an appropriate effluent gas cleaning device. DBCP in solid form may also be disposed in a state-approved sanitary landfill.

IV. Monitoring and Measurement Procedures

A. Exposure above the permissible exposure limit.

1. *Eight Hour Exposure Evaluation:* Measurements taken for the purpose of determining employee exposure under this section are best taken so that the average 8-hour exposure may be determined from a single 8-hour sample or two (2) 4-hour samples. Air samples should be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee).

2. *Monitoring Techniques:* The sampling and analysis under this section may be performed by collecting the DBCP vapor on

petroleum based charcoal absorption tubes with subsequent chemical analyses. The method of measurement chosen should determine the concentration of airborne DBCP at the permissible exposure limit to an accuracy of plus or minus 25 percent. If charcoal tubes are used, a total volume of 10 liters should be collected at a flow rate of 50 cc. per minute for each tube. Analyze the resultant samples as you would samples of halogenated solvent.

B. Since many of the duties relating to employee protection are dependent on the results of monitoring and measuring procedures, employers should assure that the evaluation of employee exposures is performed by a competent industrial hygienist or other technically qualified person.

V. Protective Clothing

Employees should be required to wear appropriate protective clothing to prevent any possibility of skin contact with DBCP. Because DBCP is absorbed through the skin, it is important to prevent skin contact with both liquid and solid forms of DBCP. Protective clothing should include impermeable coveralls or similar fullbody work clothing, gloves, headcoverings, and workshoes or shoe coverings. Standard rubber and neoprene gloves do not offer adequate protection and should not be relied upon to keep DBCP off the skin. DBCP should never be allowed to remain on the skin. Clothing and shoes should not be allowed to become contaminated with the material, and if they do, they should be promptly removed and not worn again until completely free of the material. Any protective clothing which has developed leaks or is otherwise found to be defective should be repaired or replaced. Employees should also be required to wear splash-proof safety goggles where there is any possibility of DBCP contacting the eyes.

VI. Housekeeping and Hygiene Facilities

1. The workplace must be kept clean, orderly and in a sanitary condition;

2. Dry sweeping and the use of compressed air is unsafe for the cleaning of floors and other surfaces where DBCP dust or liquids are found. To minimize the contamination of air with dust, vacuuming with either portable or permanent systems must be used. If a portable unit is selected, the exhaust must be attached to the general workplace exhaust ventilation system, or collected within the vacuum unit equipped with high efficiency filters or other appropriate means of contamination removal and not used for other purposes. Units used to collect DBCP must be labeled.

3. Adequate washing facilities with hot and cold water must be provided, and maintained in a sanitary condition. Suitable cleansing agents should also be provided to assure the effective removal of DBCP from the skin.

4. Change or dressing rooms with individual clothes storage facilities must be provided to prevent the contamination of street clothes with DBCP. Because of the hazardous nature of DBCP, contaminated protective clothing must be stored in closed containers for cleaning or disposal.

VII. Miscellaneous Precautions

A. Store DBCP in tightly closed containers in a cool, well ventilated area.

B. Use of supplied-air suits or other impervious clothing (such as acid suits) may be necessary to prevent skin contact with DBCP. Supplied-air suits should be selected, used, and maintained under the supervision of persons knowlegeable in the limitations and potential life-endangering characteristics of supplied-air suits.

C. The use of air-conditioned suits may be necessary in warmer climates.

D. Advise employees of all areas and operations where exposure to DBCP could occur.

VIII. Common Operations

Common operations in which exposure to DBCP is likely to occur are: during its production; and during its formulation into pesticides and fumigants.

Appendix C to § 1915.1044—Medical Surveillance Guidelines For DBCP

I. Route of Entry

Inhalation; skin absorption

II. Toxicology

Recent data collected on workers involved in the manufacture and formulation of DBCP has shown that DBCP can cause sterility at very low levels of exposure. This finding is supported by studies showing that DBCP causes sterility in animals. Chronic exposure to DBCP resulted in pronounced necrotic action on the parenchymatous organs (i.e., liver, kidney, spleen) and on the testicles of rats at concentrations as low as 5 ppm. Rats that were chronically exposed to DBCP also showed changes in the composition of the blood, showing low RBC, hemoglobin, and WBC, and high reticulocyte levels as well as functional hepatic disturbance, manifesting itself in a long prothrombin time. Reznik et al. noted a single dose of 100 mg produced profound depression of the nervous system of rats. Their condition gradually improved. Acute exposure also resulted in the destruction of the sex gland activity of male rats as well as causing changes in the estrous cycle in female rats. Animal studies have also associated DBCP with an increased incidence of carcinoma. Olson, et al. orally administered DBCP to rats and mice 5 times per week at experimentally predetermined maximally tolerated doses and at half those doses. As early as ten weeks after initiation of treatment, DBCP induced a high incidence of squamous cell carcinomas of the stomach with metastases in both species. DBCP also induced mammary adenocarcinomas in the female rats at both dose levels.

III. Signs and Symptoms

A. Inhalation: Nausea, eye irritation, conjunctivitis, respiratory irritation, pulmonary congestion or edema, CNS depression with apathy, sluggishness, and ataxia.

B. Dermal: Erythema or inflammation and dermatitis on repeated exposure.

IV. Special Tests

A. *Semen analysis:* The following information excerpted from the document "Evaluation of Testicular Function", submitted by the Corporate Medical Department of the Shell Oil Company (exhibit 39–3), may be useful to physicians conducting the medical surveillance program;

In performing semen analyses certain minimal but specific criteria should be met:

1. It is recommended that a minimum of three valid semen analyses be obtained in order to make a determination of an individual's average sperm count.

2. A period of sexual abstinence is necessary prior to the collection of each masturbatory sample. It is recommended that intercourse or masturbation be performed 48 hours before the actual specimen collection. A period of 48 hours of abstinence would follow; then the masturbatory sample would be collected.

3. Each semen specimen should be collected in a clean, widemouthed, glass jar (not necessarily pre-sterilized) in a manner designated by the examining physician. Any part of the seminal fluid exam should be initialed *only after liquifaction* is complete, i.e., 30 to 45 minutes after collection.

4. Semen volume should be measured to the nearest 1/10 of a cubic centimeter.

5. Sperm density should be determined using routine techniques involving the use of a white cell pipette and a hemocytometer chamber. The immobilizing fluid most effective and most easily obtained for this process is distilled water.

6. Thin, dry smears of the semen should be made for a morphologic classification of the sperm forms and should be stained with either hematoxalin or the more difficult, yet more precise, Papanicolaou technique. Also of importance to record is obvious sperm agglutination, pyospermia, delayed liquifaction (greater than 30 minutes), and hyperviscosity. In addition, pH, using nitrazine paper, should be determined.

7. A total morphology evaluation should include percentages of the following:

a. Normal (oval) forms,

b. Tapered forms,

c. Amorphous forms (include large and small sperm shapes),

d. Duplicated (either heads or tails) forms, and

e. Immature forms.

8. Each sample should be evaluated for sperm *viability* (percent viable sperm moving at the time of examination) as well as sperm *motility* (subjective characterization of "purposeful forward sperm progression" of the majority of those viable sperm analyzed) within two hours after collection, ideally by the same or equally qualified examiner.

B. *Serum determinations:* The following serum determinations should be performed by radioimmuno-assay techniques using National Institutes of Health (NIH) specific antigen or antigen preparations of equivalent sensitivity:

1. Serum follicle stimulating hormone (FSH);

2. Serum luteinizing hormone (LH); and

3. Serum total estrogen (females only).

V. Treatment

Remove from exposure immediately, give oxygen or artificial resuscitation if indicated.

Contaminated clothing and shoes should be removed immediately. Flush eyes and wash contaminated skin. If swallowed and the person is conscious, induce vomiting. Recovery from mild exposures is usually rapid and complete.

VI. Surveillance and Preventive Considerations

A. *Other considerations.* DBCP can cause both acute and chronic effects. It is important that the physician become familiar with the operating conditions in which exposure to DBCP occurs. Those with respiratory disorders may not tolerate the wearing of negative pressure respirators.

B. *Surveillance and screening.* Medical histories and laboratory examinations are required for each employee subject to exposure to DBCP. The employer should screen employees for history of certain medical conditions (listed below) which might place the employee at increased risk from exposure.

1. *Liver disease.* The primary site of biotransformation and detoxification of DBCP is the liver. Liver dysfunctions likely to inhibit the conjugation reactions will tend to promote the toxic actions of DBCP. These precautions should be considered before exposing persons with impaired liver function to DBCP.

2. *Renal disease.* Because DBCP has been associated with injury to the kidney it is important that special consideration be given to those with possible impairment of renal function.

3. *Skin desease.* DBCP can penetrate the skin and can cause erythema on prolonged exposure. Persons with pre-existing skin disorders may be more susceptible to the effects of DBCP.

4. *Blood dyscrasias.* DBCP has been shown to decrease the content of erythrocytes, hemoglobin, and leukocytes in the blood, as well as increase the prothrombin time. Persons with existing blood disorders may be more susceptible to the effects of DBCP.

5. *Reproductive disorders.* Animal studies have associated DBCP with various effects on the reproductive organs. Among these effects are atrophy of the testicles and changes in the estrous cycle. Persons with pre-existing reproductive disorders may be at increased risk to these effects of DBCP.

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[43 FR 11527, Mar. 17, 1978, as amended at 45 FR 35283, May 23, 1980; 49 FR 18295, Apr. 30, 1984; 54 FR 24334, June 7, 1989]

§ 1915.1045 Acrylonitrile.

(a) *Scope and application.* (1) This section applies to all occupational exposures to acrylonitrile (AN), Chemical Abstracts Service Registry No. 000107131, except as provided in paragraphs (a)(2) and (a)(3) of this section.

(2) This section does not apply to exposures which result solely from the processing, use, and handling of the following materials:

(i) ABS resins, SAN resins, nitrile barrier resins, solid nitrile elastomers, and acrylic and modacrylic fibers, when these listed materials are in the form of finished polymers, and products fabricated from such finished polymers;

(ii) Materials made from and/or containing AN for which objective data is reasonably relied upon to demonstrate that the material is not capable of releasing AN in airborne concentrations in excess of 1 ppm as an eight (8)-hour time-weighted average, under the expected conditions of processing, use, and handling which will cause the greatest possible release; and

(iii) Solid materials made from and/or containing AN which will not be heated above 170° F (77° C) during handling, use, or processing.

(3) An employer relying upon exemption under paragraph (a)(2)(ii) shall maintain records of the objective data supporting that exemption, and of the basis of the employer's reliance on the data, as provided in paragraph (q) of this section.

(b) *Definitions. Acrylonitrile* or *AN* means acrylonitrile monomer, chemical formula CH_2=CHCN.

Action level means a concentration of AN of 1 ppm as an eight (8)-hour time-weighted average.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the opportunity to observe monitoring procedures under paragraph (r) of this section.

Decontamination means treatment of materials and surfaces by water washdown, ventilation, or other means, to assure that the materials will not expose employees to airborne concentrations of AN above 1 means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which results in an unexpected massive release of AN.

Liquid AN means AN monomer in liquid form, and liquid or semiliquid polymer intermediates, including slurries, suspensions, emulsions, and solutions, produced during the polymerization of AN.

OSHA Area Office means the Area Office of the Occupational Safety and Health Administration having jurisdiction over the geographic area where the affected workplace is located.

(c) *Permissible exposure limits*— (1) *Inhalation.* (i) *Time weighted average limit (TWA).* The employer shall assure that no employee is exposed to an airborne concentration of acrylonitrile in excess of two (2) parts acrylonitrile per million parts of air (2 ppm) as an eight (8)-hour time-weighted average.

(ii) *Ceiling limit.* The employer shall assure that no employee is exposed to an airborne concentration of acrylonitrile in excess of ten (10) ppm as averaged over any fifteen (15)-minute period during the work day.

(2) *Dermal and eye exposure.* The employer shall assure that no employee is exposed to skin contact or eye contact with liquid AN.

(d) *Notification of regulated areas and emergencies*— (1) *Regulated areas.* Within thirty (30) days following the establishment of a regulated area pursuant to paragraph (f) of this section, the employer shall report the following information to the OSHA Area Office:

(i) The address and location of each establishment which has one or more regulated areas;

(ii) The locations, within the establishment, of each regulated area;

(iii) A brief description of each process or operation which results in employee exposure to AN in regulated areas; and

(iv) The number of employees engaged in each process or operation within each regulated area which results in exposure to AN, and an estimate of the frequency and degree of exposure that occurs.

Whenever there has been a significant change in the information required to be reported by this paragraph, the employer shall promptly provide the

new information to the OSHA Area Office.

(2) *Emergencies.* Emergencies, and the facts obtainable at that time, shall be reported within seventy-two (72) hours of the initial occurrence to the OSHA Area Office. Upon request of the OSHA Area Office; the employer shall submit additional information in writing relevant to the nature and extent of employee exposures and measures taken to prevent future emergencies of a similar nature.

(e) *Exposure monitoring*—(1) *General.* (i) Determinations of airborne exposure levels shall be made from air samples that are representative of each employee's exposure to AN over an eight (8)-hour period.

(ii) For the purposes of this section, employee exposure is that exposure which would occur if the employee were not using a respirator.

(2) *Initial monitoring.* Each employer who has a place of employment in which AN is present shall monitor each such workplace and work operation to accurately determine the airborne concentrations of AN to which employees may be exposed.

(3) *Frequency.* (i) If the monitoring required by this section reveals employee exposure to be below the action level, the employer may discontinue monitoring for that employee.

(ii) If the monitoring required by this section reveals employee exposure to be at or above the action level but below the permissible exposure limits, the employer shall repeat such monitoring for each such employee at least quarterly. The employer shall continue these quarterly measurements until at least two consecutive measurements taken at least seven (7) days apart, are below the action level, and thereafter the employer may discontinue monitoring for that employee.

(iii) If the monitoring required by this section reveals employee exposure to be in excess of the permissible exposure limits, the employer shall repeat these determinations for each such employee at least monthly. The employer shall continue these monthly measurements until at least two consecutive measurements, taken at least seven (7) days apart, are below the permissible exposure limits, and thereafter the employer shall monitor at least quarterly.

(4) *Additional monitoring.* Whenever there has been a production, process, control, or personnel change which may result in new or additional exposures to AN, or whenever the employer has any other reason to suspect a change which may result in new or additional exposures to AN, additional monitoring which complies with this paragraph shall be conducted.

(5) *Employee notification.* (i) Within five (5) working days after the receipt of the results of monitoring required by this paragraph, the employer shall notify each employee in writing of the results which represent that employee's exposure.

(ii) Whenever the results indicate that the representative employee exposure exceeds the permissible exposure limits, the employer shall include in the written notice a statement that the permissible exposure limits were exceeded and a description of the corrective action being taken to reduce exposure to or below the permissible exposure limits.

(6) *Accuracy of measurement.* The method of measurement of employee exposures shall be accurate to a confidence level of 95 percent, to within plus or minus 35 percent for concentrations of AN at or above the permissible exposure limits, and plus or minus 50 percent for concentrations of AN below the permissible exposure limits.

(f) *Regulated areas.* (1) The employer shall establish regulated areas where AN concentrations are in excess of the permissible exposure limits.

(2) Regulated areas shall be demarcated and segregated from the rest of the workplace, in any manner that minimizes the number of persons who will be exposed to AN.

(3) Access to regulated areas shall be limited to authorized persons or to persons otherwise authorized by the act or regulations issued pursuant thereto.

(4) The employer shall assure that food or beverages are not present or consumed, tobacco products are not present or used, and cosmetics are not applied in the regulated area.

(g) *Methods of compliance*—(1) *Engineering and work practice controls.* (i) By November 2, 1980, the employer shall institute engineering and work practice controls to reduce and maintain employee exposures to AN, to or below the permissible exposure limits, except to the extent that the employer establishes that such controls are not feasible.

(ii) Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposures to or below the permissible exposure limits, the employer shall nonetheless use them to reduce exposures to the lowest levels achievable by these controls, and shall supplement them by the use of respiratory protection which complies with the requirements of paragraph (h) of this section.

(2) *Compliance program.* (i) The employer shall establish and implement a written program to reduce employee exposures to or below the permissible exposure limits solely by means of engineering and work practice controls, as required by paragraph (g)(1) of this section.

(ii) Written plans for these compliance programs shall include at least the following:

(A) A description of each operation or process resulting in employee exposure to AN above the permissible exposure limits;

(B) An outline of the nature of the engineering controls and work practices to be applied to the operation or process in question;

(C) A report of the technology considered in meeting the permissible exposure limits;

(D) A schedule for implementation of engineering and work practice controls for the operation or process, which shall project completion no later than November 2, 1980; and

(E) Other relevant information.

(iii) The employer shall complete the steps set forth in the compliance program by the dates in the schedule.

(iv) Written plans shall be submitted upon request to the Assistant Secretary and the Director, and shall be available at the worksite for examination and copying by the Assistant Secretary, the Director, or any affected employee or representative.

(v) The plans required by this paragraph shall be revised and updated at least every six (6) months to reflect the current status of the program.

(h) *Respiratory protection*—(1) *General.* The employer shall assure that respirators are used where required by this section to reduce employee exposure to within the permissible exposure limits. Respirators shall be used in the following circumstances:

(i) During the time period necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations, such as maintenance and repair activities or reactor cleaning, in which the employer establishes that engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the permissible exposure limits; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respiratory protection is required under this section, the employer shall select and provide, at no cost to the employee,

the appropriate type of respirator from table I below, and shall assure that the employee wears the respirator provided.

TABLE I—RESPIRATORY PROTECTION FOR ACRYLONITRILE (AN)

Concentration of AN or condition of use	Respirator type
(a) Less than or equal to 20 ppm	(1) Chemical cartridge respirator with organic vapor cartridge(s) and half-mask facepiece; or (2) Supplied air respirator with half-mask facepiece.
(b) Less than or equal to 100 ppm or maximum use concentration (MUC) of cartridges or canisters, whichever is lower.	(1) Full facepiece respirator with (A) organic vapor cartridges, (B) organic vapor gas mask chin-style, or (C) organic vapor gas mask canister, front- or back-mounted; (2) Supplied air respirator with full facepiece; or (3) Self-contained breathing apparatus with full facepiece.
(c) Less than or equal to 4,000 ppm	(1) Supplied air respirator operated in the positive pressure mode with full facepiece, helmet, suit, or hood.
(d) Greater than 4,000 ppm or unknown concentration	(1) Supplied air and auxiliary self-contained breathing apparatus with full facepiece in positive pressure mode; or (2) Self-contained breathing apparatus with full facepiece in positive pressure mode.
(e) Firefighting	Self-contained breathing apparatus with full facepiece in positive pressure mode.
(f) Escape	(1) Any organic vapor respirator, or (2) Any self-contained breathing apparatus.

(ii) The employer shall select respirators from among those approved for use with organic vapors by the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11.

(3) *Respirator program.* (i) The employer shall institute a respiratory protection program in accordance with 29 CFR 1910.134 (b), (d), (e), and (f).

(ii) Where air/purifying respirators (chemical cartridge- or canister-type) are used, the air-purifying canister or cartridge(s) shall be replaced prior to the expiration of their service life or at the completion of each shift, whichever occurs first. A label shall be attached to the cartridge or canister to indicate the date and time at which it is first installed on the respirator.

(iii) *Testing.* Fit testing of respirators shall be performed to assure that the respirator selected provides the protection required by table I.

(A) *Qualitative fit.* The employer shall perform qualitative fit tests at the time of initial fitting and at least semiannually thereafter for each employee wearing respirators.

(B) *Quantitative fit.* Each employer with more than 10 employees wearing negative pressure respirators shall perform quantitative fit testing at the time of initial fitting and at least semiannually thereafter for each such employee.

(iv) Employees who wear respirators shall be allowed to wash their faces and to wipe clean the face-to-facepiece seals on their respirators to minimize potential skin irritation associated with respirator use.

(i) *Emergency situations*—(1) *Written plans.* (i) A written plan for emergency situations shall be developed for each workplace where liquid AN is present. Appropriate portions of the plan shall be implemented in the event of an emergency.

(ii) The plan shall specifically provide that employees engaged in correcting emergency conditions shall be equipped as required in paragraph (h) of this section until the emergency is abated.

(iii) Employees not engaged in correcting the emergency shall be evacuated from the area and shall not be permitted to return until the emergency is abated.

(2) *Alerting employees.* Where there is the possibility of employee exposure to AN in excess of the ceiling limit, a general alarm shall be installed and used to promptly alert employees of such occurrences.

(j) *Protective clothing and equipment*—(1) *Provision and use.* Where eye or skin contact with liquid AN may occur, the employer shall provide at no cost to the employee, and assure that employees wear, impermeable protective clothing or other equipment to protect any area of the body which may come in contact with liquid AN. The provision of §§ 1910.132 and 1910.133 shall be complied with.

(2) *Cleaning and replacement.* (i) The employer shall clean, launder, maintain, or replace protective clothing and equipment required by this section as needed to maintain their effectiveness.

(ii) The employer shall assure that impermeable protective clothing which contacts or is likely to have contacted liquid AN shall be decontaminated before being removed by the employee.

(iii) The employer shall assure that an employee whose nonimpermeable clothing becomes wetted with liquid AN shall immediately remove that clothing and proceed to shower. The clothing shall be decontaminated before it is removed from the regulated area.

(iv) The employer shall assure that no employee removes protective clothing or equipment from the change room, except for those employees authorized to do so for the purpose of laundering, maintenance, or disposal.

(v) The employer shall inform any person who launders or cleans protective clothing or equipment of the potentially harmful effects of exposure to AN.

(k) *Housekeeping.* (1) All surfaces shall be maintained free of visible accumulations of liquid AN.

(2) For operations involving liquid AN, the employer shall institute a program for detecting leaks and spills of liquid AN, including regular visual inspections.

(3) Where spills of liquid AN are detected, the employer shall assure that surfaces contacted by the liquid AN are decontaminated. Employees not engaged in decontamination activities shall leave the area of the spill, and shall not be permitted in the area until decontamination is completed.

(l) *Waste disposal.* AN waste, scrap, debris, bags, containers, or equipment shall be decontaminated before being incorporated in the general waste disposal system.

(m) *Hygiene facilities and practices.* (1) Where employees are exposed to airborne concentrations of AN above the permissible exposure limits, or where employees are required to wear

protective clothing or equipment pursuant to paragraph (j) of this section, the facilities required by 29 CFR 1910.141, including clean change rooms and shower facilities, shall be provided by the employer for the use of those employees, and the employer shall assure that the employees use the facilities provided.

(2) The employer shall assure that employees wearing protective clothing or equipment for protection from skin contact with liquid AN shall shower at the end of the work shift.

(3) The employer shall assure that, in the event of skin or eye exposure to liquid AN, the affected employee shall shower immediately to minimize the danger of skin absorption.

(4) The employer shall assure that employees working in the regulated area wash their hands and faces prior to eating.

(n) *Medical surveillance*—(1) *General.* (i) The employer shall institute a program of medical surveillance for each employee who is or will be exposed to AN at or above the action level, without regard to the use of respirators. The employer shall provide each such employee with an opportunity for medical examinations and tests in accordance with this paragraph.

(ii) The employer shall assure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and that they shall be provided without cost to the employee.

(2) *Initial examinations.* At the time of initial assignment, or upon institution of the medical surveillance program, the employer shall provide each affected employee an opportunity for a medical examination, including at least the following elements:

(i) A work history and medical history with special attention to skin, respiratory, and gastrointestinal systems, and those nonspecific symptoms, such as headache, nausea, vomiting, dizziness, weakness, or other central nervous system dysfunctions that may be associated with acute or with chronic exposure to AN;

(ii) A complete physical examination giving particular attention to the peripheral and central nervous system, gastrointestinal system, respiratory system, skin, and thyroid;

(iii) A 14- by 17-inch (35.56 × 43.18 cm) posteroanterior chest X-ray; and

(iv) Further tests of the intestinal tract, including fecal occult blood screening, for all workers 40 years of age or older, and for any other affected employees for whom, in the opinion of the physician, such testing is appropriate.

(3) *Periodic examinations.* (i) The employer shall provide the examinations specified in paragraph (n)(2) of this section at least annually for all employees specified in paragraph (n)(1) of this section.

(ii) If an employee has not had the examination specified in paragraph (n)(2) of this section within 6 months preceding termination of employment, the employer shall make such examination available to the employee prior to such termination.

(4) *Additional examinations.* If the employee for any reason develops signs or symptoms which may be associated with exposure to AN, the employer shall provide an appropriate examination and emergency medical treatment.

(5) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this standard and its appendixes;

(ii) A description of the affected employee's duties as they relate to the employee's exposure;

(iii) The employee's representative exposure level;

(iv) The employee's anticipated or estimated exposure level (for preplacement examinations or in cases of exposure due to an emergency);

(v) A description of any personal protective equipment used or to be used; and

(vi) Information from previous medical examinations of the affected employee, which is not otherwise available to the examining physician.

(6) *Physician's written opinion.* (i) The employer shall obtain a written opinion from the examining physician which shall include:

(A) The results of the medical examination and test performed;

(B) The physician's opinion as to whether the employee has any detected medical condition(s) which would place the employee at an increased risk of material impairment of the employee's health from exposure to AN;

(C) Any recommended limitations upon the employee's exposure to AN or upon the use of protective clothing and equipment such as respirators; and

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(ii) The employer shall instruct the physician not to reveal in the written opinion specific findings or diagnoses unrelated to occupational exposure to AN.

(iii) The employer shall provide a copy of the written opinion to the affected employee.

(o) *Employee information and training*—(1) *Training program.* (i) By January 2, 1979, the employer shall institute a training program for and assure the participation of all employees exposed to AN above the action level, all employees whose exposures are maintained below the action level by engineering and work practice controls, and all employees subject to potential skin or eye contact with liquid AN.

(ii) Training shall be provided at the time of initial assignment, or upon institution of the training program, and at least annually thereafter, and the employer shall assure that each employee is informed of the following:

(A) The information contained in appendixes A and B;

(B) The quantity, location, manner of use, release, or storage of AN, and the specific nature of operations which could result in exposure to AN, as well as any necessary protective steps;

(C) The purpose, proper use, and limitations of respirators and protective clothing;

(D) The purpose and a description of the medical surveillance program required by paragraph (n) of this section;

(E) The emergency procedures developed, as required by paragraph (i) of this section;

(F) Engineering and work practice controls, their function, and the employee's relationship to these controls; and

(G) A review of this standard.

(2) *Access to training materials.* (i) The employer shall make a copy of this standard and its appendixes readily available to all affected employees.

(ii) The employer shall provide, upon request, all materials relating to the employee information and training program to the Assistant Secretary and the Director.

(p) *Signs and labels*—(1) *General.* (i) The employer may use labels or signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs and labels required by this paragraph.

(ii) The employer shall assure that no statement appears on or near any sign or label required by this paragraph which contradicts or detracts from the required sign or label.

(2) *Signs.* (i) The employer shall post signs to clearly indicate all workplaces where AN concentrations exceed the permissable exposure limits. The signs shall bear the following legend:

DANGER
ACRYLONITRILE (AN)
CANCER HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS MAY BE
REQUIRED

(ii) The employer shall assure that signs required by this paragraph are illuminated and cleaned as necessary so that the legend is readily visible.

(3) *Labels.* (i) The employer shall assure that precautionary labels are affixed to all containers of liquid AN and AN-based materials not exempted under paragraph (a)(2) of this standard. The employer shall assure that the lables remain affixed when the materials are sold, distributed, or otherwise leave the employer's workplace.

(ii) The employer shall assure that the precautionary labels required by this paragraph are readily visible and legible. The labels shall bear the following legend:

DANGER
CONTAINS ACRYLONITRILE (AN)
CANCER HAZARD

(q) *Recordkeeping*—(1) *Objective data for exempted operations.* (i) Where the processing, use, and handling of materials made from or containing AN are exempted pursuant to paragraph (a)(2)(ii) of this section, the employer shall establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

(ii) This record shall include at least the following information:

(A) The material qualifying for exemption;

(B) The source of the objective data;

(C) The testing protocol, results of testing, and/or analysis of the material for the release of AN;

(D) A description of the operation exempted and how the data supports the exemption; and

(E) Other data relevant to the operations, materials, and processing covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) *Exposure monitoring.* (i) The employer shall establish and maintain an accurate record of all monitoring required by paragraph (e) of this section.

(ii) This record shall include:

(A) The dates, number, duration, and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure;

(B) A description of the sampling and analytical methods used and the data relied upon to establish that the methods used meet the accuracy and precision requirements of paragraph (e)(6) of this section;

(C) Type of respiratory protective devices worn, if any; and

(D) Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent.

(iii) The employer shall maintain this record for at least forty (40) years, or for the duration of employment plus twenty (20) years, whichever is longer.

(3) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by paragraph (n) of this section.

(ii) This record shall include:

(A) A copy of the physician's written opinions;

(B) Any employee medical complaints related to exposure to AN;

(C) A copy of the information provided to the physician as required by paragraph (n)(5) of this section; and

(D) A copy of the employee's medical and work history.

(iii) The employer shall assure that this record be maintained for at least forty (40) years, or for the duration of employment plus twenty (20) years, whichever is longer.

(4) *Availability.* (i) The employer shall make all records required to be maintained by this section available, upon request, to the Assistant Secretary and the Director for examination and copying.

(ii) Records required by paragraphs (q)(1) through (q)(3) of this section shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a) through (e) and (q) through (i). Records required by paragraph (q)(1) shall be provided in the same manner as exposure monitoring records.

(5) *Transfer of records.* (i) Whenever the employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by this section for the prescribed period.

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, these records shall be transmitted to the Director.

(iii) At the expiration of the retention period for the records required to be maintained pursuant to this section, the employer shall notify the Director at least 3 months prior to the disposal of the records, and shall transmit them to the Director upon request.

(iv) The employer shall also comply with any additional requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(r) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees, or their designated representatives, an opportunity to observe any monitoring of employee exposure to AN conducted pursuant to paragraph (e) of this section.

(2) *Observation procedures.* (i) Whenever observation of the monitoring of employee exposure to AN requires entry into an area where the use of protective clothing or equipment is required, the employer shall provide the observer with personal protective clothing and equipment required to be worn by employees working in the area, assure the use of such clothing and equipment, and require the observer to comply with all other applicable safety and health procedures.

(ii) Without interfering with the monitoring, observers shall be entitled:

(A) To receive an explanation of the measurement procedures;

(B) To observe all steps related to the measurement of airborne concentrations of AN performed at the place of exposure; and

(C) To record the results obtained.

(s) *Effective date:* (1) This section shall become effective November 2, 1978.

(2) Monitoring and medical surveillance conducted since January 17, 1978, under the provisions of the emergency temporary standard may be relied upon by the employer to meet the initial monitoring and initial medical surveillance requirements of this section.

(3) Training programs must be implemented by January 2, 1979.

(4) Engineering and work practice controls required by paragraph (g) of this section shall be implemented no later than November 2, 1980.

(t) *Appendixes.* The information contained in the appendixes is not intended, by itself, to create any additional obligation not otherwise imposed, or to detract from any obligation.

(Approved by the Office of Management and Budget under control number 1218–0126)

Appendix A to § 1915.1045—Substance Safety Data Sheet for Acrylonitrile

I. Substance Identification

A. Substance: Acrylonitrile (CH_2 CHCN).

B. Synonyms: Propenenitrile; vinyl cyanide; cyanoethylene; AN; VCN; acylon; carbacryl; fumigrian; ventox.

C. Acrylonitrile can be found as a liquid or vapor, and can also be found in polymer

resins, rubbers, plastics, polyols, and other polymers having acrylonitrile as a raw or intermediate material.

D. AN is used in the manufacture of acrylic and modiacrylic fibers, acrylic plastics and resins, speciality polymers, nitrile rubbers, and other organic chemicals. It has also been used as a fumigant.

E. Appearance and odor: Colorless to pale yellow liquid with a pungent odor which can only be detected at concentrations above the permissible exposure level, in a range of 13–19 parts AN per million parts of air (13–19 ppm).

F. Permissible exposure: Exposure may not exceed either:

1. Two parts AN per million parts of air (2 ppm) averaged over the 8-hour workday; or

2. Ten parts AN per million parts of air (10 ppm) averaged over any 15-minute period in the workday.

3. In addition, skin and eye contact with liquid AN is prohibited.

II. Health Hazard Data

A. Acrylonitrile can affect your body if you inhale the vapor (breathing), if it comes in contact with your eyes or skin, or if you swallow it. It may enter your body through your skin.

B. Effects of overexposure: 1. Short-term exposure: Acrylonitrile can cause eye irritation, nausea, vomiting, headache, sneezing, weakness, and light-headedness. At high concentrations, the effects of exposure may go on to loss of consciousness and death. When acrylonitrile is held in contact with the skin after being absorbed into shoe leather or clothing, it may produce blisters following several hours of no apparent effect. Unless the shoes or clothing are removed immediately and the area washed, blistering will occur. Usually there is no pain or inflammation associated with blister formation.

2. Long-term exposure: Acrylonitrile has been shown to cause cancer in laboratory animals and has been associated with higher incidences of cancer in humans. Repeated or prolonged exposure of the skin to acrylonitrile may produce irritation and dermatitis.

3. Reporting signs and symptoms: You should inform your employer if you develop any signs or symptoms and suspect they are caused by exposure to acrylonitrile.

III. Emergency First Aid Procedures

A. Eye exposure: If acrylonitrile gets into your eyes, wash your eyes immediately with large amounts of water, lifting the lower and upper lids occasionally. Get medical attention immediately. Contact lenses should not be worn when working with this chemical.

B. Skin exposure: If acrylonitrile gets on your skin, immediately wash the contaminated skin with water. If acrylonitrile soaks through your clothing, especially your shoes, remove the clothing immediately and wash the skin with water. If symptoms occur after washing, get medical attention immediately. Thoroughly wash the clothing before reusing. Contaminated leather shoes or other leather articles should be discarded.

C. Inhalation: If you or any other person breathes in large amounts of acrylonitrile, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

D. Swallowing: When acrylonitrile has been swallowed, give the person large quantities of water immediately. After the water has been swallowed, try to get the person to vomit by having him touch the back of his throat with his finger. Do not make an unconscious person vomit. Get medical attention immediately.

E. Rescue: Move the affected person from the hazardous exposure. If the exposed person has been overcome, notify someone else and put into effect the established emergency procedures. Do not become a casualty yourself. Understand your emergency rescue procedures and know the location of the emergency equipment before the need arises.

F. Special first aid procedures: First aid kits containing an adequate supply (at least two dozen) of amyl nitrite pearls, each containing 0.3 ml, should be maintained at each site where acrylonitrile is used. When a person is suspected of receiving an overexposure to acrylonitrile, immediately remove that person from the contaminated area using established rescue procedures. Contaminated clothing must be removed and the acrylonitrile washed from the skin immediately. Artificial respiration should be started at once if breathing has stopped. If the person is unconscious, amyl nitrite may be used as an antidote by a properly trained individual in accordance with established emergency procedures. Medical aid should be obtained immediately.

IV. Respirators and Protective Clothing

A. Respirators. You may be required to wear a respirator for nonroutine activities, in emergencies, while your employer is in the process of reducing acrylonitrile exposures through engineering controls, and in areas where engineering controls are not feasible. If respirators are worn, they must have a Mine Safety and Health Administration (MSHA or MESA) or National Institute for Occupational Safety and Health (NIOSH) label of approval for use with organic vapors. (Older respirators may have a Bureau of Mines approval label.) For effective protection, respirators must fit your face and head snugly. Respirators should not be loosened or removed in work situations where their use is required.

Acrylonitrile does not have a detectable odor except at levels above the permissible exposure limits. Do not depend on odor to warn you when a respirator cartridge or canister is exhausted. Cartridges or canisters must be changed daily or before the end-of-service-life, whichever comes first. Reuse of these may allow acrylonitrille to gradually filter through the cartridge and cause exposures which you cannot detect by odor. If you can smell acrylonitrile while wearing a respirator, proceed immediately to fresh air. If you experience difficulty breathing while wearing a respirator, tell your employer.

B. Supplied-air suits: In some work situations, the wearing of supplied-air suits may be necessary. Your employer must instruct you in their proper use and operation.

C. Protective clothing: You must wear impervious clothing, gloves, face shield, or other appropriate protective clothing to prevent skin contact with liquid acrylonitrile. Where protective clothing is required, your employer is required to provide clean garments to you as necessary to assume that the clothing protects you adequately.

Replace or repair impervious clothing that has developed leaks.

Acrylonitrile should never be allowed to remain on the skin. Clothing and shoes which are not impervious to acrylonitrile should not be allowed to become contaminated with acrylonitrile, and if they do the clothing and shoes should be promptly removed and decontaminated. The clothing should be laundered or discarded after the AN is removed. Once acrylonitrile penetrates shoes or other leather articles, they should not be worn again.

D. Eye protection: You must wear splashproof safety goggles in areas where liquid acrylonitrile may contact your eyes. In addition, contact lenses should not be worn in areas where eye contact with acrylonitrile can occur.

V. Precautions for Safe Use, Handling, and Storage

A. Acrylonitrile is a flammable liquid, and its vapors can easily form explosive mixtures in air.

B. Acrylonitrile must be stored in tightly closed containers in a cool, well-ventilated area, away from heat, sparks, flames, strong oxidizers (especially bromine), strong bases, copper, copper alloys, ammonia, and amines.

C. Sources of ignition such as smoking and open flames are prohibited wherever acrylonitrile is handled, used, or stored in a manner that could create a potential fire or explosion hazard.

D. You should use non-sparking tools when opening or closing metal containers of acrylonitrile, and containers must be bonded and grounded when pouring or transferring liquid acrylonitrile.

E. You must immediately remove any non-impervious clothing that becomes wetted with acrylonitrile, and this clothing must not be reworn until the acrylonitrile is removed from the clothing.

F. Impervious clothing wet with liquid acrylonitrile can be easily ignited. This clothing must be washed down with water before you remove it.

G. If your skin becomes wet with liquid acrylonitrile, you must promptly and thoroughly wash or shower with soap or mild detergent to remove any acrylonitrile from your skin.

H. You must not keep food, beverages, or smoking materials, nor are you permitted to eat or smoke in regulated areas where acrylonitrile concentrations are above the permissible exposure limits.

I. If you contact liquid acrylonitrile, you must wash your hands thoroughly with soap or mild detergent and water before eating, smoking, or using toilet facilities.

J. Fire extinguishers and quick drenching facilities must be readily available, and you should know where they are and how to operate them.

K. Ask your supervisor where acrylonitrile is used in your work area and for any additional plant safety and health rules.

VI. Access to Information

A. Each year, your employer is required to inform you of the information contained in this Substance Safety Data Sheet for acrylonitrile. In addition, you employer must instruct you in the proper work practices for using acrylonitrile, emergency procedures, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to acrylonitrile. You or your representative has the right to observe employee measurements and to record the results obtained. Your employer is required to inform you of your exposure. If your employer determines that you are being overexposed, he or she is required to inform you of the actions which are being taken to reduce your exposure to within permissible exposure limits.

C. Your employer is required to keep records of your exposures and medical examinations. These records must be kept by the employer for at least forty (40) years or for the period of your employment plus twenty (20) years, whichever is longer.

D. Your employer is required to release your exposure and medical records to you or your representative upon your request.

Appendix B to § 1915.1045—Substance Technical Guidelines for Acrylonitrile

I. Physical and Chemical Data

A. Substance identification: 1. Synonyms: AN; VCN; vinyl cyanide; propenenitrile; cyanoethylene; Acrylon; Carbacryl; Fumigrain; Ventox.

2. Formula: $CH_2{=}CHCN$.

3. Molecular weight: 53.1.

B. Physical data: 1. Boiling point (760 mm Hg): 77.3° C (171° F);

2. Specific gravity (water=1): 0.81 (at 20° C or 68° F);

3. Vapor density (air=1 at boiling point of acrylonitrile): 1.83;

4. Melting point: −83° C (−117° F);

5. Vapor pressure (@20° F): 83 mm Hg;

6. Solubility in water, percent by weight @20° C (68° F): 7.35;

7. Evaporation rate (Butyl Acetate=1): 4.54; and

8. Appearance and odor: Colorless to pale yellow liquid with a pungent odor at concentrations above the permissible exposure level. Any detectable odor of acrylonitrile may indicate overexposure.

II. Fire, Explosion, and Reactivity Hazard Data

A. Fire: 1. Flash point: −1° C (30° F) (closed cup).

2. Autoignition temperature: 481° C (898° F).

3. Flammable limits air, percent by volume: Lower: 3, Upper: 17.

4. Extinguishing media: Alcohol foam, carbon dioxide, and dry chemical.

5. Special fire-fighting procedures: Do not use a solid stream of water, since the stream will scatter and spread the fire. Use water to cool containers exposed to a fire.

6. Unusual fire and explosion hazards: Acrylonitrile is a flammable liquid. Its vapors can easily form explosive mixtures with air. All ignition sources must be controlled where acrylonitrile is handled, used, or stored in a manner that could create a potential fire or explosion hazard. Acrylonitrile vapors are heavier than air and may travel along the ground and be ignited by open flames or sparks at locations remote from the site at which acrylonitrile is being handled.

7. For purposes of compliance with the requirements of 29 CFR 1910.106, acrylonitrile is classified as a class IB flammable liquid. For example, 7,500 ppm, approximately one-fourth of the lower flammable limit, would be considered to pose a potential fire and explosion hazard.

8. For purposes of compliance with 29 CFR 1910.157, acrylonitrile is classified as a Class B fire hazard.

9. For purpose of compliance with 29 CFR 1919.309, locations classified as hazardous due to the presence of acrylonitrile shall be Class I, Group D.

B. Reactivity:

1. Conditions contributing to instability: Acrylonitrile will polymerize when hot, and the additional heat liberated by the polymerization may cause containers to explode. Pure AN may self-polymerize, with a rapid build-up of pressure, resulting in an explosion hazard. Inhibitors are added to the commercial product to prevent self-polymerization.

2. Incompatibilities: Contact with strong oxidizers (especially bromine) and strong bases may cause fires and explosions. Contact with copper, copper alloys, ammonia, and amines may start serious decomposition.

3. Hazardous decompostion products: Toxic gases and vapors (such as hydrogen cyanide, oxides of nitrogen, and carbon monoxide) may be released in a fire involving acrylonitrile and certain polymers made from acrylonitrile.

4. Special precautions: Liquid acrylonitrile will attack some forms of plastics, rubbers, and coatings.

III. Spill, Leak, and Disposal Procedures

A. If acrylonitrile is spilled or leaked, the following steps should be taken:

1. Remove all ignition sources.

2. The area should be evacuated at once and re-entered only after the area has been thoroughly ventilated and washed down with water.

3. If liquid acrylonitrile or polymer intermediate, collect for reclamation or absorb in paper, vermiculite, dry sand, earth, or similar material, or wash down with water into process sewer system.

B. Persons not wearing protective equipment should be restricted from areas of spills or leaks until clean-up has been completed.

C. Waste disposal methods: Waste material shall be disposed of in a manner that is not hazardous to employees or to the general population. Spills of acrylonitrile and flushing of such spills shall be channeled for appropriate treatment or collection for disposal. They shall not be channeled directly into the sanitary sewer system. In selecting the method of waste disposal, applicable local, State, and Federal regulations should be consulted.

IV. Monitoring and Measurement Procedures

A. Exposure above the Permissible Exposure Limit:

1. Eight-hour exposure evaluation: Measurements taken for the purpose of determining employee exposure under this section are best taken so that the average 8-hour exposure may be determined from a single 8-hour sample or two (2) 4-hour samples. Air samples should be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee.)

2. Ceiling evaluation: Measurements taken for the purpose of determining employee exposure under this section must be taken during periods of maximum expected airborne concentrations of acrylonitrile in the employee's breathing zone. A minimum of three (3) measurements should be taken on one work shift. The average of all measurements taken is an estimate of the employee's ceiling exposure.

3. Monitoring techniques: The sampling and analysis under this section may be performed by collecting the acrylonitrile vapor on charcoal adsorption tubes or other composition adsorption tubes, with subsequent chemical analysis. Sampling and analysis may also be performed by instruments such as real-time continuous monitoring systems, portable direct-reading instruments, or passive dosimeters. Analysis of resultant samples should be by gas chromatograph.

Appendix D lists methods of sampling and analysis which have been tested by NIOSH and OSHA for use with acrylonitrile. NIOSH and OSHA have validated modifications of NIOSH Method S–156 (See Appendix D) under laboratory conditions for concentrations below 1 ppm. The employer has the obligation of selecting a monitoring method which meets the accuracy and precision requirements of the standard under his unique field conditions. The standard requires that methods of monitoring must be accurate, to a 95-percent confidence level, to ±35-percent for concentrations of AN at or above 2 ppm, and to ±-50-percent for concentrations below 2 ppm. In addition to the methods described in Appendix D, there are numerous other methods available for monitoring for AN in the workplace. Details on these other methods have been submitted by various companies to the rulemaking record, and are available at the OSHA Docket Office.

B. Since many of the duties relating to employee exposure are dependent on the results of monitoring and measuring procedures, employers shall assure that the evaluation of employee exposures is performed by a competent industrial hygienist or other technically qualified person.

V. Protective Clothing

Employees shall be provided with and required to wear appropriate protective clothing to prevent any possibility of skin contact with liquid AN. Because acrylonitrile is absorbed through the skin, it is important

to prevent skin contact with liquid AN. Protective clothing shall include impermeable coveralls or similar full-body work clothing, gloves, head-coverings, as appropriate to protect areas of the body which may come in contact with liquid AN.

Employers should ascertain that the protective garmets are impermeable to acrylonitrile. Non-impermeable clothing and shoes should not be allowed to become contaminated with liquid AN. If permeable clothing does become contaminated, it should be promptly removed, placed in a regulated area for removal of the AN, and not worn again until the AN is removed. If leather footwear or other leather garments become wet from acrylonitrile, they should be replaced and not worn again, due to the ability of leather to absorb acrylonitrile and hold it against the skin. Since there is no pain associated with the blistering which may result from skin contact with liquid AN, it is essential that the employee be informed of this hazard so that he or she can be protected.

Any protective clothing which has developed leaks or is otherwise found to be defective shall be repaired or replaced. Clean protective clothing shall be provided to the employee as necessary to assure its protectiveness. Whenever impervious clothing becomes wet with liquid AN, it shall be washed down with water before being removed by the employee. Employees are also required to wear splash-proof safety goggles where there is any possibility of acrylonitrile contacting the eyes.

VI. Housekeeping and Hygiene Facilities

For purposes of complying with 29 CFR 1910.141, the following items should be emphasized:

A. The workplace should be kept clean, orderly, and in a sanitary condition. The employer is required to institute a leak and spill detection program for operations involving liquid AN in order to detect sources of fugitive AN emissions.

B. Dry sweeping and the use of compressed air is unsafe for the cleaning of floors and other surfaces where liquid AN may be found.

C. Adequate washing facilities with hot and cold water are to be provided, and maintained in a sanitary condition. Suitable cleansing agents are also to be provided to assure the effective removal of acrylonitrile from the skin.

D. Change or dressing rooms with individual clothes storage facilities must be provided to prevent the contamination of street clothes with acrylonitrile. Because of the hazardous nature of acrylonitrile, contaminated protective clothing should be placed in a regulated area designated by the employer for removal of the AN before the clothing is laundered or disposed of.

VII. Miscellaneous Precautions

A. Store acrylonitrile in tightly-closed containers in a cool, well-ventilated area and take necessary precautions to avoid any explosion hazard.

B. High exposures to acrylonitrile can occur when transferring the liquid from one container to another.

C. Non-sparking tools must be used to open and close metal acrylonitrile containers. These containers must be effectively grounded and bonded prior to pouring.

D. Never store uninhibited acrylonitrile.

E. Acrylonitrile vapors are not inhibited. They may form polymers and clog vents of storage tanks.

F. Use of supplied-air suits or other impervious coverings may be necessary to prevent skin contact with and provide respiratory protection from acrylonitrile where the concentration of acrylonitrile is unknown or is above the ceiling limit. Supplied-air suits should be selected, used, and maintained under the immediate supervision of persons knowledgeable in the limitations and potential life-endangering characteristics of supplied-air suits.

G. Employers shall advise employees of all areas and operations where exposure to acrylonitrile could occur.

VIII. Common Operations

Common operations in which exposure to acrylonitrile is likely to occur include the following: Manufacture of the acrylonitrile monomer; synthesis of acrylic fibers, ABS, SAN, and nitrile barrier plastics and resins, nitrile rubber, surface coatings, specialty chemicals, use as a chemical intermediate, use as a fumigant and in the cyanoethylation of cotton.

Appendix C to § 1915.1045—Medical Surveillance Guidelines for Acrylonitrile

I. Route of Entry

Inhalation; skin absorption; ingestion.

II. Toxicology

Acrylonitrile vapor is an asphyxiant due to inhibitory action on metabolic enzyme systems. Animals exposed to 75 or 100 ppm for 7 hours have shown signs of anoxia; in some animals which died at the higher level, cyanomethemoglobin was found in the blood. Two human fatalities from accidental poisioning have been reported; one was caused by inhalation of an unknown concentration of the vapor, and the other was thought to be caused by skin absorption or inhalation. Most cases of intoxication from industrial exposure have been mild, with rapid onset of eye irritation, headache, sneezing, and nausea. Weakness, lightheadedness, and vomiting may also occur. Exposure to high concentrations may produce profound weakness, asphyxia, and death. The vapor is a severe eye irritant. Prolonged skin contract with the liquid may result in absorption with systemic effects, and in the formation of large blisters after a latent period of several hours. Although there is usually little or no pain or inflammation, the affected skin resembles a second-degree thermal burn. Solutions spilled on exposed skin, or on areas covered only by a light layer of clothing, evaporate rapidly, leaving no irritation, or, at the most, mild transient redness. Repeated spills on exposed skin may result in dermatitis due to solvent effects.

Results after 1 year of a planned 2-year animal study on the effects of exposure to acrylonitrile have indicated that rats ingesting as little as 35 ppm in their drinking water develop tumors of the central nervous system. The interim results of this study have been supported by a similar study being conducted by the same laboratory, involving exposure of rats by inhalation of acrylonitrile vapor, which has shown similar types of tumors in animals exposed to 80 ppm.

In addition, the preliminary results of an epidemiological study being performed by duPont on a cohort of workers in their Camden, S.C. acrylic fiber plant indicate a statistically significant increase in the incidence of colon and lung cancers among employees exposed to acrylonitrile.

III. Signs and Symptoms of Acute Overexposure

Asphyxia and death can occur from exposure to high concentrations of acrylonitrile. Symptoms of overexposure include eye irritation, headache, sneezing, nausea and vomiting, weakness, and light-headedness. Prolonged skin contact can cause blisters on the skin with appearance of a second-degree burn, but with little or no pain. Repeated skin contact may produce scaling dermatits.

IV. Treatment of Acute Overexposure

Remove employee from exposure. Immediately flush eyes with water and wash skin with soap or mild detergent and water. If AN has been swallowed, and person is conscious, induce vomiting. Give artificial resuscitation if indicated. More severe cases, such as those associated with loss of consciousness, may be treated by the intravenous administration of sodium nitrite, followed by sodium thiosulfate, although this is not as effective for acrylonitrile poisoning as for inorganic cyanide poisoning.

V. Surveillance and Preventive Considerations

A. As noted above, exposure to acrylonitrile has been linked to increased incidence of cancers of the colon and lung in employees of the duPont acrylic fiber plant in Camden, S.C. In addition, the animal testing of acrylonitrile has resulted in the development of cancers of the central nervous system in rats exposed by either inhalation or ingestion. The physician should be aware of the findings of these studies in evaluating the health of employees exposed to acrylonitrile.

Most reported acute effects of occupational exposure to acrylonitrile are due to its ability to cause tissue anoxia and asphyxia. The effects are similar to those caused by hydrogen cyanide. Liquid acrylonitrile can be absorbed through the skin upon prolonged contact. The liquid readily penetrates leather, and will produce burns of the feet if footwear contaminated with acrylonitrile is not removed.

It is important for the physician to become familiar with the operating conditions in which exposure to acrylonitrile may occur. Those employees with skin diseases may not tolerate the wearing of whatever protective clothing may be necessary to protect them from exposure. In addition, those with chronic respiratory disease may not tolerate the wearing of negative-pressure respirators.

B. Surveillance and screening. Medical histories and laboratory examinations are required for each employee subject to

exposure to acrylonitrile above the action level. The employer must screen employees for history of certain medical conditions which might place the employee at increased risk from exposure.

1. *Central nervous system dysfunction.* Acute effects of exposure to acrylonitrile generally involve the central nervous system. Symptoms of acrylonitrile exposure include headache, nausea, dizziness, and general weakness. The animal studies cited above suggest possible carcinogenic effects of acrylonitrile on the central nervous system, since rats exposed by either inhalation or ingestion have developed similar CNS tumors.

2. *Respiratory disease.* The du Pont data indicate an increased risk of lung cancer among employees exposed to acrylonitrile.

3. *Gastrointestinal disease.* The du Pont data indicate an increased risk of cancer of the colon among employees exposed to acrylonitrile. In addition, the animal studies show possible tumor production in the stomachs of the rats in the ingestion study.

4. *Skin disease.* Acrylonitrile can cause skin burns when prolonged skin contact with the liquid occurs. In addition, repeated skin contact with the liquid can cause dermatitis.

5. *General.* The purpose of the medical procedures outlined in the standard is to establish a baseline for future health monitoring. Persons unusually susceptible to the effects of anoxia or those with anemia would be expected to be at increased risk. In addition to emphasis on the CNS, respiratory and gastro-intestinal systems, the cardiovascular system, liver, and kidney function should also be stressed.

Appendix D to § 1915.1045—Sampling and Analytical Methods for Acrylonitrile

There are many methods available for monitoring employee exposures to acrylonitrile. Most of these involve the use of charcoal tubes and sampling pumps, with analysis by gas chromatograph. The essential differences between the charcoal tube methods include, among others, the use of different desorbing solvents, the use of different lots of charcoal, and the use of different equipment for analysis of the samples.

Besides charcoal, considerable work has been performed on methods using porous polymer sampling tubes and passive dosimeters. In addition, there are several portable gas analyzers and monitoring units available on the open market.

This appendix contains details for the methods which have been tested at OSHA Analytical Laboratory in Salt Lake City, and NIOSH in Cincinnati. Each is a variation on NIOSH Method S–156, which is also included for reference. This does not indicate that these methods are the only ones which will be satisfactory. There also may be workplace situations in which these methods are not adequate, due to such factors as high humidity. Copies of the other methods available to OSHA are available in the rulemaking record, and may be obtained from the OSHA Docket Office. These include, the Union Carbide, Monsanto, Dow Chemical and Dow Badische methods, as well as NISOH Method P & CAM 127.

Employers who note problems with sample breakthrough should try larger charcoal tubes. Tubes of larger capacity are available, and are often used for sampling vinyl chloride. In addition, lower flow rates and shorter sampling times should be beneficial in minimizing breakthrough problems.

Whatever method the employer chooses, he must assure himself of the method's accuracy and precision under the unique conditions present in his workplace.

NIOSH Method S–156 **(Unmodified)**

Analyte: Acrylonitrile.
Matrix: Air.
Procedure: Absorption on charcoal, desorption with methanol, GC.

1. *Principle of the method* (Reference 11.1).

1.1 A known volume of air is drawn through a charcoal tube to trap the organic vapors present.

1.2 The charcoal in the tube is transferred to a small, stoppered sample container, and the analyte is desorbed with methanol.

1.3 An aliquot of the desorbed sample is injected into a gas chromatograph.

1.4 The area of the resulting peak is determined and compared with areas obtained for standards.

2. *Range and sensitivity.*

2.1 This method was validated over the range of 17.5–70.0 mg/cu m at an atmospheric temperature and pressure of 22° C and 760 MM Hg, using a 20-liter sample. Under the conditions of sample size (20–liters) the probable useful range of this method is 4.5–135 mg-cu m. The method is capable of measuring much smaller amounts if the desorption efficiency is adequate. Desorption efficiency must be determined over the range used.

2.2 The upper limit of the range of the method is dependent on the adsorptive capacity of the charcoal tube. This capacity varies with the concentrations of acrylonitrile and other substances in the air. The first section of the charcoal tube was found to hold at least 3.97 mg of acrylonitrile when a test atmosphere containing 92.0 mg/cu m of acrylonitrile in air was sampled 0.18 liter per minute for 240 minutes; at that time the concentration of acrylonitrile in the effluent was less than 5 percent of that in the influent. (The charcoal tube consists of two sections of activated charcoal separated by a section of urethane foam. See section 6.2.) If a particular atmosphere is suspected of containing a large amount of contaminant, a smaller sampling volume should be taken.

3. *Interference.*

3.1 When the amount of water in the air is so great that condensation actually occurs in the tube, organic vapors will not be trapped efficiently. Preliminary experiments using toluene indicate that high humidity severely decreases the breakthrough volume.

3.2 When interfering compounds are known or suspected to be present in the air, such information, including their suspected identities, should be transmitted with the sample.

3.3 It must be emphasized that any compound which has the same retention time as the analyte at the operating conditions described in this method is an interference. Retention time data on a single column cannot be considered proof of chemical identity.

3.4 If the possibility of interference exists, separation conditions (column packing, temperature, etc.) must be changed to circumvent the problem.

4. *Precision and accuracy.*

4.1 The Coefficient of Variation (CV_T) for the total analytical and sampling method in the range of 17.5–70.0 mg/cu m was 0.073. This value corresponds to a 3.3 mg/cu m standard deviation at the (previous) OSHA standard level (20 ppm). Statistical information and details of the validation and experimental test procedures can be found in Reference 11.2.

4.2 On the average the concentrations obtained at the 20 ppm level using the overall sampling and analytical method were 6.0 percent lower than the "true" concentrations for a limited number of laboratory experiments. Any difference between the "found" and "true" concentrations may not represent a bias in the sampling and analytical method, but rather a random variation from the experimentally determined "true" concentration. Therefore, no recovery correction should be applied to the final result in section 10.5.

5. *Advantages and disadvantages of the method.*

5.1 The sampling device is small, portable, and involves no liquids. Interferences are minimal, and most of those which do occur can be eliminated by altering chromatographic conditions. The tubes are analyzed by means of a quick, instrumental method.

The method can also be used for the simultaneous analysis of two or more substances suspected to be present in the same sample by simply changing gas chromatographic conditions.

5.2 One disadvantage of the method is that the amount of sample which can be taken is limited by the number of milligrams that the tube will hold before overloading. When the sample value obtained for the backup section of the charcoal tube exceeds 25 percent of that found on the front section, the possibility of sample loss exists.

5.3 Furthermore, the precision of the method is limited by the reproducibility of the pressure drop across the tubes. This drop will affect the flow rate and cause the volume to be imprecise, because the pump is usually calibrated for one tube only.

6. *Apparatus.*

6.1 A calibrated personal sampling pump whose flow can be determined within ±5 percent at the recommended flow rate. (Reference 11.3).

6.2 Charcoal tubes: Glass tubes with both ends flame sealed, 7 cm long with a 6-mm O.D. and a 4-mm I.D., containing 2 sections of 20/40 mesh activated charcoal separated by a 2-mm portion of urethane foam. The activated charcoals prepared from coconut shells and is fired at 600° C prior to packing. The adsorbing section contains 100 mg of charcoal, the backup section 50 mg. A 3-mm portion of urethane foam is placed between the outlet end of the tube and the backup section. A plug of silicated glass wool is placed in front of the adsorbing section. The

pressure drop across the tube must be less than 1 inch of mercury at a flow rate of 1 liter per minute.

6.3 Gas chromatograph equipped with a flame ionization detector.

6.4 Column (4-ft×¼-in stainless steel) packed with 50/80 mesh Poropak, type Q.

6.5 An electronic integrator or some other suitable method for measuring peak areas.

6.6 Two-milliliter sample containers with glass stoppers or Teflon-lined caps. If an automatic sample injector is used, the associated vials may be used.

6.7 Microliter syringes: 10-microliter and other convenient sizes for making standards.

6.8 Pipets: 1.0-ml delivery pipets.

6.9 Volumetric flask: 10-ml or convenient sizes for making standard solutions.

7. *Reagents.*

7.1 Chromatographic quality methanol.

7.2 Acrylonitrile, reagent grade.

7.3 Hexane, reagent grade.

7.4 Purified nitrogen.

7.5 Prepurified hydrogen.

7.6 Filtered compressed air.

8. *Procedure.*

8.1 Cleaning of equipment. All glassware used for the laboratory analysis should be detergent washed and thoroughly rinsed with tap water and distilled water.

8.2 Calibration of personal pumps. Each personal pump must be calibrated with a representative charcoal tube in the line. This will minimize errors associated with uncertainties in the sample volume collected.

8.3 Collection and shipping of samples.

8.3.1 Immediately before sampling, break the ends of the tube to provide an opening at least one-half the internal diameter of the tube (2 mm).

8.3.2 The smaller section of charcoal is used as a backup and should be positioned nearest the sampling pump.

8.3.3 The charcoal tube should be placed in a vertical direction during sampling to minimize channeling through the charcoal.

8.3.4 Air being sampled should not be passed through any hose or tubing before entering the charcoal tube.

8.3.5 A maximum sample size of 20 liters is recommended. Sample at a flow of 0.20 liter per minute or less. The flow rate should be known with an accuracy of at least ±5 percent.

8.3.6 The temperature and pressure of the atmosphere being sampled should be recorded. If pressure reading is not available, record the elevation.

8.3.7 The charcoal tubes should be capped with the supplied plastic caps immediately after sampling. Under no circumstances should rubber caps be used.

8.3.8 With each batch of 10 samples submit one tube from the same lot of tubes which was used for sample collection and which is subjected to exactly the same handling as the samples except that no air is drawn through it. Label this as a blank.

8.3.9 Capped tubes should be packed tightly and padded before they are shipped to minimize tube breakage during shipping.

8.3.10 A sample of the bulk material should be submitted to the laboratory in a glass container with a Teflon-lined cap. This sample should not be transported in the same container as the charcoal tubes.

8.4 Analysis of samples.

8.4.1 Preparation of samples. In preparation for analysis, each charcoal tube is scored with a file in front of the first section of charcoal and broken open. The glass wool is removed and discarded. The charcoal in the first (larger) section is transferred to a 2-ml stoppered sample container. The separating section of foam is removed and discarded; the second section is transferred to another stoppered container. These two sections are analyzed separately.

8.4.2 Desorption of samples. Prior to analysis, 1.0 ml of methanol is pipetted into each sample container. Desorption should be done for 30 minutes. Tests indicate that this is adequate if the sample is agitated occasionally during this period. If an automatic sample injector is used, the sample vials should be capped as soon as the solvent is added to minimize volatilization.

8.4.3 GC conditions. The typical operating conditions for the gas chromatograph are:

1. 50 ml/min (60 psig) nitrogen carrier gas flow.
2. 65 ml/min (24 psig) hydrogen gas flow to detector.
3. 500 ml/min (50 psig) air flow to detector.
4. 235° C injector temperature.
5. 255° C manifold temperature (detector).
6. 155° C column temperature.

8.4.4 Injection. The first step in the analysis is the injection of the sample into the gas chromatograph. To eliminate difficulties arising from blowback or distillation within the syringe needle, one should employ the solvent flush injection technique. The 10-microliter syringe is first flushed with solvent several times to wet the barrel and plunger. Three microliters of solvent are drawn into the syringe to increase the accuracy and reproducibility of the injected sample volume. The needle is removed from the solvent, and the plunger is pulled back about 0.2 microliter to separate the solvent flush from the sample with a pocket of air to be used as a marker. The needle is then immersed in the sample, and a 5-microliter aliquot is withdrawn, taking into consideration the volume of the needle, since the sample in the needle will be completely injected. After the needle is removed from the sample and prior to injection, the plunger is pulled back 1.2 microliters to minimize evaporation of the sample from the tip of the needle. Observe that the sample occupies 4.9–5.0 microliters in the barrel of the syringe. Duplicate injections of each sample and standard should be made. No more than a 3 percent difference in area is to be expected. An automatic sample injector can be used if it is shown to give reproducibility at least as good as the solvent flush method.

8.4.5 Measurement of area. The area of the sample peak is measured by an electronic integrator or some other suitable form of area measurement, and preliminary results are read from a standard curve prepared as discussed below.

8.5 Determination of desorption efficiency.

8.5.1 Importance of determination. The desorption efficiency of a particular compound can vary from one laboratory to another and also from one batch of charcoal to another. Thus, it is necessary to determine at least once the percentage of the specific compound that is removed in the desorption process, provided the same batch of charcoal is used.

8.5.2 Procedure for determining desorption efficiency. Activated charcoal equivalent to the amount in the first section of the sampling tube (100 mg) is measured into a 2.5 in, 4-mm I.D. glass tube, flame sealed at one end. This charcoal must be from the same batch as that used in obtaining the samples and can be obtained from unused charcoal tubes. The open end is capped with Parafilm. A known amount of hexane solution of acrylonitrile containing 0.239 g/ml is injected directly into the activated charcoal with a microliter syringe, and tube is capped with more Parafilm. When using an automatic sample injector, the sample injector vials, capped with Teflon-faced septa, may be used in place of the glass tube.

The amount injected is equivalent to that present in a 20-liter air sample at the selected level.

Six tubes at each of three levels (0.5X, 1X, and 2X of the standard) are prepared in this manner and allowed to stand for at least overnight to assure complete adsorption of the analyte onto the charcoal. These tubes are referred to as the sample. A parallel blank tube should be treated in the same manner except that no sample is added to it. The sample and blank tubes are desorbed and analyzed in exactly the same manner as the sampling tube described in section 8.4.

Two or three standards are prepared by injecting the same volume of compound into 1.0 ml of methanol with the same syringe used in the preparation of the samples. These are analyzed with the samples.

The desorption efficiency (D.E.) equals the average weight in mg recovered from the tube divided by the weight in mg added to the tube, or

$$\text{D.E.} = \frac{\text{Average weight recovered (mg)}}{\text{weight added (mg)}}$$

The desorption efficiency is dependent on the amount of analyte collected on the charcoal. Plot the desorption efficiency versus weight of analyte found. This curve is used in section 10.4 to correct for adsorption losses.

9. *Calibration and standards.*

It is convenient to express concentration of standards in terms of mg/1.0 ml methanol, because samples are desorbed in this amount of methanol. The density of the analyte is used to convert mg into microliters for easy measurement with a microliter syringe. A series of standards, varying in concentration over the range of interest, is prepared and analyzed under the same GC conditions and during the same time period as the unknown samples. Curves are established by plotting concentration in mg/1.0 ml versus peak area.

Note: Since no internal standard is used in the method, standard solutions must be analyzed at the same time that the sample analysis is done. This will minimize the effect of known day-to-day variations and

variations during the same day of the FID response.

10. *Calculations.*

10.1 Read the weight, in mg, corresponding to each peak area from the standard curve. No volume corrections are needed, because the standard curve is based on mg/1.0 ml methanol and the volume of sample injected is identical to the volume of the standards injected.

10.2 Corrections for the bank must be made for each sample.

mg = mg sample − mg blank

Where:

mg sample = mg found in front section of sample tube.

mg sample = mg found in front section of blank tube.

A similar procedure is followed for the backup sections.

10.3 Add the weights found in the front and backup sections to get the total weight in the sample.

10.4 Read the desorption efficiency from the curve (see sec. 8.5.2) for the amount found in the front section. Divide the total weight by this desorption efficiency to obtain the corrected mg/sample.

$$\text{Corrected mg/sample} = \frac{\text{Total weight}}{\text{D.E.}}$$

10.5 The concentration of the analyte in the air sampled can be expressed in mg/cu m.

$$\text{mg/cu m} = \text{Corrected mg (section 10.4)} \times \frac{1{,}000\ \text{(liter/cu m)}}{\text{air volume sampled (liter)}}$$

10.6 Another method of expressing concentration is ppm.

$$\text{ppm} = \text{m mg/cu} \times 24.45/\text{M.W.} \times 760/P \times T. + 273/298$$

Where:

P = Pressure (mm Hg) of air sampled.

T = Temperature (°C) of air sampled.

24.45 = Molar volume (liter/mole) at 25°C and 760 mm Hg.

M.W. = Molecular weight (g/mole) of analyte.

760 = Standard pressure (mm Hg).

298 = Standard temperature (°K).

11. *References.*

11.1 White, L. D. et al., "A Convenient Optimized Method for the Analysis of Selected Solvent Vapors in the Industrial Atmosphere," *Amer. Ind. Hyg. Assoc. J.*, 31:225 (1970).

11.2 Documentation of NIOSH.Validation Tests, NIOSH Contract No. CDC–99–74–45.

11.3 Final Report, NIOSH Contract HSM–99–71–31, "Personal Sampler Pump for Charcoal Tubes," September 15, 1972.

NIOSH Modification of NIOSH Method S–156

The NIOSH recommended method for low levels for acrylonitrile is a modification of method S–156. It differs in the following respects:

(1) Samples are desorbed using 1 ml of 1 percent acetone in CS_2 rather than methanol.

(2) The analytical column and conditions are:

Column: 20 percent SP–1000 on 80/100 Supelcoport 10 feet x ⅛ inch S.S.

Conditions:

Injector temperature: 200°C.

Detector temperature: 100° C.

Column temperature: 85° C.

Helium flow: 25 ml/min.

Air flow: 450 ml/min.

Hydrogen flow: 55 ml/min.

(3) A 2 µl injection of the desorbed analyte is used.

(4) A sampling rate of 100 ml/min is recommended.

OSHA Laboratory Modification of NIOSH Method S–156

Analyte: Acrylonitrile.

Matrix: Air.

Procedure: Adsorption on charcoal, desorption with methanol, GC.

1. *Principle of the Method* (Reference 1).

1.1 A known volume of air is drawn through a charcoal tube to trap the organic vapors present.

1.2 The charcoal in the tube is transferred to a small, stoppered sample vial, and the analyte is desorbed with methanol.

1.3 An aliquot of the desorbed sample is injected into a gas chromatograph.

1.4 The area of the resulting peak is determined and compared with areas obtained for standards.

2. *Advantages and disadvantages of the method.*

2.1 The sampling device is small, portable, and involves no liquids. Interferences are minimal, and most of those which do occur can be eliminated by altering chromatographic conditions. The tubes are analyzed by means of a quick, instrumental method.

2.2 This method may not be adequate for the simultaneous analysis of two or more substances.

2.3 The amount of sample which can be taken is limited by the number of milligrams that the tube will hold before overloading. When the sample value obtained for the backup section of the charcoal tube exceeds 25 percent of that found on the front section, the possibility of sample loss exists.

2.4 The precision of the method is limited by the reproducibility of the pressure drop across the tubes. This drop will affect the flow rate and cause the volume to be imprecise, because the pump is usually calibrated for one tube only.

3. *Apparatus.*

3.1 A calibrated personal sampling pump whose flow can be determined within ±5 percent at the recommended flow rate.

3.2 Charcoal tubes: Glass tube with both ends flame sealed, 7 cm long with a 6-mm O.D. and a 4-mm I.D., containing 2 sections of 20/40 mesh activated charcoal separated by a 2-mm portion of urethane foam. The activated charcoal is prepared from coconut shells and is fired at 600° C prior to packing. The adsorbing section contains 100 mg of charcoal, the back-up section 50 mg. A 3-mm portion of urethane foam is placed between the outlet end of the tube and the back-up section. A plug of sililated glass wool is placed in front of the adsorbing section. The pressure drop across the tube must be less than one inch of mercury at a flow rate of 1 liter per minute.

3.3 Gas chromatograph equipped with a nitrogen phosphorus detector.

3.4 Column (10-ft x 1/8"-in stainless steel) packed with 100/120 Supelcoport coated with 10 percent SP 1000.

3.5 An electronic integrator or some other suitable method for measuring peak area.

3.6 Two-milliliter sample vials with Teflon-lined caps

3.7 Microliter syringes: 10-microliter, and other convenient sizes for making standards.

3.8 Pipets: 1.0-ml delivery pipets.

3.9 Volumetric flasks: convenient sizes for making standard solutions.

4. *Reagents.*

4.1 Chromatographic quality methanol.

4.2 Acrylonitrile, reagent grade.

4.3 Filtered compressed air.

4.4 Purified hydrogen.

4.5 Purified helium.

5. *Procedure.*

5.1 Cleaning of equipment. All glassware used for the laboratory analysis should be

properly cleaned and free of organics which could interfere in the analysis.

5.2 Calibration of personal pumps. Each pump must be calibrated with a representative charcoal tube in the line.

5.3 Collection and shipping of samples.

5.3.1 Immediately before sampling, break the ends of the tube to provide an opening at least one-half the internal diameter of the tube (2 mm).

5.3.2 The smaller section of the charcoal is used as the backup and should be placed nearest the sampling pump.

5.3.3 The charcoal should be placed in a vertical position during sampling to minimize channeling through the charcoal.

5.3.4 Air being sampled should not be passed through any hose or tubing before entering the charcoal tube.

5.3.5 A sample size of 20 liters is recommended. Sample at a flow rate of approximately 0.2 liters per minute. The flow rate should be known with an accuracy of at least ±5 percent.

5.3.6 The temperature and pressure of the atmosphere being sampled should be recorded.

5.3.7 The charcoal tubes should be capped with the supplied plastic caps immediately after sampling. Rubber caps should not be used.

5.3.8 Submit at least one blank tube (a charcoal tube subjected to the same handling procedures, without having any air drawn through it) with each set of samples.

5.3.9. Take necessary shipping and packing precautions to minimize breakage of samples.

5.4 Analysis of samples.

5.4.1 Preparation of samples. In preparation for analysis, each charcoal tube is scored with a file in front of the first section of charcoal and broken open. The glass wool is removed and discarded. The charcoal in the first (larger) section is transferred to a 2-ml vial. The separating section of foam is removed and discarded; the section is transferred to another capped vial. These two sections are analyzed separately.

5.4.2 Desorption of samples. Prior to analysis, 1.0 ml of methanol is pipetted into each sample container. Desorption should be done for 30 minutes in an ultrasonic bath. The sample vials are recapped as soon as the solvent is added.

5.4.3 GC conditions. The typical operating conditions for the gas chromatograph are:

1. 30 ml/min (60 psig) helium carrier gas flow.
2. 3.0 ml/min (30 psig) hydrogen gas flow to detector.
3. 50 ml/min (60 psig) air flow to detector.
4. 200° C injector temperature.
5. 200° C dejector temperature.
6. 100° C column temperature.

5.4.4 Injection. Solvent flush technique or equivalent.

5.4.5 Measurement of area. The area of the sample peak is measured by an electronic integator or some other suitable form of area measurement, and preliminary results are read from a standard curve prepared as discussed below.

5.5 Determination of desorption efficiency.

5.5.1 Importance of determination. The desorption efficiency of a particular compound can vary from one laboratory to another and also from one batch of charcoal to another. Thus, it is necessary to determine, at least once, the percentage of the specific compound that is removed in the desorption process, provided the same batch of charcoal is used.

5.5.2 Procedure for determining desorption efficiency. The reference portion of the charcoal tube is removed. To the remaining portion, amounts representing 0.5X, 1X, and 2X (X represents TLV) based on a 20 l air sample are injected onto several tubes at each level. Dilutions of acrylonitrile with methanol are made to allow injection of measurable quantities. These tubes are then allowed to equilibrate at least overnight. Following equilibration they are analyzed following the same procedure as the samples A curve of the desorption efficiency

amt recovered/amt added

is plotted versus amount of analyte found. This curve is used to correct for adsorption losses.

6. *Calibration and standards.*

A series of standards, varying in concentration over the range of interest, is prepared and analyzed under the same GC conditions and during the same time period as the unknown samples. Curves are prepared by plotting concentration versus peak area.

Note: Since no internal standard is used in the method, standard solutions must be analyzed at the same time that the sample analysis is done. This will minimize the effect of known day-to-day variations and variations during the same day of the NPD response. Multiple injections are necessary.

7. *Calculations.*

Read the weight, corresponding to each peak area from the standard curve, correct for the blank, correct for the desorption efficiency, and make necessary air volume corrections.

8. *Reference.* NIOSH Method S–156.

§ 1915.1047 Ethylene oxide.

(a) *Scope and application.* (1) This section applies to all occupational exposures to ethylene oxide (EtO), Chemical Abstracts Service Registry No. 75–21–8, except as provided in paragraph (a)(2) of this section.

(2) This section does not apply to the processing, use, or handling of products containing EtO where objective data are reasonably relied upon that demonstrate that the product is not capable of releasing EtO in airborne concentrations at or above the action level, and may not reasonably be foreseen to release EtO in excess of the excursion limit, under the expected conditions of processing, use, or handling that will cause the greatest possible release.

(3) Where products containing EtO are exempted under paragraph (a)(2) of this section, the employer shall maintain records of the objective data supporting that exemption and the basis for the employer's reliance on the data, as provided in paragraph (k)(1) of this section.

(b) *Definitions:* For the purpose of this section, the following definitions shall apply:

Action level means a concentration of airborne EtO of 0.5 ppm calculated as an eight (8)-hour time-weighted average.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring and measuring procedures under paragraph (l) of this section, or any other person authorized by the Act or regulations issued under the Act.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that is likely to or does result in an unexpected significant release of EtO.

Employee exposure means exposure to airborne EtO which would occur if the employee were not using respiratory protective equipment.

Ethylene oxide or *EtO* means the three-membered ring organic compound with chemical formula C_2H_4O.

(c) *Permissible exposure limits*—(1) *8-hour time weighted average (TWA).* The employer shall ensure that no employee is exposed to an airborne concentration of EtO in excess of one (1) part EtO per million parts of air (1 ppm) as an 8-hour time-weighted average (8-hour TWA).

(2) *Excursion limit.* The employer shall ensure that no employee is exposed to an airborne concentration of EtO in excess of 5 parts of EtO per million parts of air (5 ppm) as averaged over a sampling period of fifteen (15) minutes.

(d) *Exposure monitoring*—(1) *General.* (i) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 15-minute short-term exposures of each employee.

(ii) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for each shift for each job classification in each work area. Representative 15-minute short-term employee exposures shall be

determined on the basis of one or more samples representing 15-minute exposures associated with operations that are most likely to produce exposures above the excursion limit for each shift for each job classification in each work area.

(iii) Where the employer can document that exposure levels are equivalent for similar operations in different work shifts, the employer need only determine representative employee exposure for that operation during one shift.

(2) *Initial monitoring.* (i) Each employer who has a workplace or work operation covered by this standard, except as provided for in paragraph (a)(2) or (d)(2)(ii) of this section, shall perform initial monitoring to determine accurately the airborne concentrations of EtO to which employees may be exposed.

(ii) Where the employer has monitored after June 15, 1983 and the monitoring satisfies all other requirements of this section, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (d)(2)(i) of this section.

(iii) Where the employer has previously monitored for the excursion limit and the monitoring satisfies all other requirements of this sections, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (d)(2)(i) of this section.

(3) *Monitoring frequency (periodic monitoring).* (i) If the monitoring required by paragraph (d)(2) of this section reveals employee exposure at or above the action level but at or below the 8-hour TWA, the employer shall repeat such monitoring for each such employee at least every 6 months.

(ii) If the monitoring required by paragraph (d)(2)(i) of this section reveals employee exposure above the 8-hour TWA, the employer shall repeat such monitoring for each such employee at least every 3 months.

(iii) The employer may alter the monitoring schedule from quarterly to semiannually for any employee for whom two consecutive measurements taken at least 7 days apart indicate that the employee's exposure has decreased to or below the 8-hour TWA.

(iv) If the monitoring required by paragraph (d)(2)(i) of this section reveals employee exposure above the 15 minute excursion limit, the employer shall repeat such monitoring for each such employee at least every 3 months, and more often as necessary to evaluate exposure the employee's short-term exposures.

(4) *Termination of monitoring.* (i) If the initial monitoring required by paragraph (d)(2)(i) of this section reveals employee exposure to be below the action level, the employer may discontinue TWA monitoring for those employees whose exposures are represented by the initial monitoring.

(ii) If the periodic monitoring required by paragraph (d)(3) of this section reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level, the employer may discontinue TWA monitoring for those employees whose exposures are represented by such monitoring.

(iii) If the initial monitoring required by paragraph (d)(2)(1) of this section reveals employee exposure to be at or below the excursion limit, the employer may discontinue excursion limit monitoring for those employees whose exposures are represented by the initial monitoring.

(iv) If the periodic monitoring required by paragraph (d)(3) of this section reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are at or below the excursion limit, the employer may discontinue excursion limit monitoring for those employees whose exposures are represented by such monitoring.

(5) *Additional monitoring.* Notwithstanding the provisions of paragraph (d)(4) of this section, the employer shall institute the exposure monitoring required under paragraphs (d)(2)(i) and (d)(3) of this section whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new or additional exposures to EtO or when the employer has any reason to suspect that a change may result in new or additional exposures.

(6) *Accuracy of monitoring.* (i) Monitoring shall be accurate, to a confidence level of 95 percent, to within plus or minus 25 percent for airborne concentrations of EtO at the 1 ppm TWA and to within plus or minus 35 percent for airborne concentrations of EtO at the action level of 0.5 ppm.

(ii) Monitoring shall be accurate, to a confidence level of 95 percent, to within plus or minus 35 percent for airborne concentrations of EtO at the excursion limit.

(7) *Employee notification of monitoring results.* (i) The employer shall, within 15 working days after the receipt of the results of any monitoring performed under this standard, notify the affected employee of these results in writing either individually or by posting of results in an appropriate location that is accessible to affected employees.

(ii) The written notification required by paragraph (d)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce employee exposure to or below the TWA and/or excursion limit, wherever monitoring results indicated that the TWA and/or excursion limit has been exceeded.

(e) *Regulated areas.* (1) The employer shall establish a regulated area wherever occupational exposure to airborne concentrations of EtO may exceed the TWA or wherever the EtO concentration exceeds or can reasonably be expected to exceed the excursion limit.

(2) Access to regulated areas shall be limited to authorized persons.

(3) Regulated areas shall be demarcated in any manner that minimizes the number of employees within the regulated area.

(f) *Methods of compliance*—(1) *Engineering controls and work practices.* (i) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to or below the TWA and to or below the excursion limit, except to the extent that such controls are not feasible.

(ii) Wherever the feasible engineering controls and work practices that can be instituted are not sufficient to reduce employee exposure to or below the TWA and to or below the excursion limit, the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (g) of this section.

(iii) Engineering controls are generally infeasible for the following operations: collection of quality assurance sampling from sterilized materials removal of biological indicators from sterilized materials; loading and unloading of tank cars; changing of ethylene oxide tanks on sterilizers; and vessel cleaning. For these operations, engineering controls are required only where the Assistant Secretary demonstrates that such controls are feasible.

(2) *Compliance program.* (i) Where the TWA or excursion limit is exceeded, the employer shall establish and implement a written program to reduce exposure to or below the TWA and to or below the excursion limit by means of engineering and work practice controls, as required by paragraph (f)(1) of this section, and by the use of respiratory protection where required or permitted under this section.

(ii) The compliance program shall include a schedule for periodic leak detection surveys and a written plan for emergency situations, as specified in paragraph (h)(i) of this section.

(iii) Written plans for a program required in paragraph (f)(2) shall be developed and furnished upon request for examination and copying to the Assistant Secretary, the Director, affected employees and designated employee representatives. Such plans shall be reviewed at least every 12 months, and shall be updated as necessary to reflect significant changes in the status of the employer's compliance program.

(iv) The employer shall not implement a schedule of employee rotation as a means of compliance with the TWA or excursion limit.

(g) *Respiratory protection and personal protective equipment*—(1) *General.* The employer shall provide respirators, and ensure that they are used, where required by this section. Respirators shall be used in the following circumstances.

(i) During the interval necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations, such as maintenance and repair activities, vessel cleaning, or other activities for which engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the TWA or excursion limit; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1, and shall ensure that the employee uses the respirator provided.

(ii) The employer shall select respirators from among those jointly approved as being acceptable for protection against EtO by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

(3) *Respirator program.* Where respiratory protection is required by this section, the employer shall institute a respirator program in accordance with 29 CFR 1910.134 (b), (d), (e), and (f).

(4) *Protective clothing and equipment.* Where eye or skin contact with liquid EtO or EtO solutions may occur, the employer shall select and provide, at no cost to the employee, appropriate protective clothing or other equipment in accordance with 29 CFR 1910.132 and 1910.133 to protect any area of the body that may come in contact with liquid EtO or EtO in solution, and shall ensure that the employee wears the protective clothing and equipment provided.

(h) *Emergency situations*—(1) *Written plan.* (i) A written plan for emergency situations shall be developed for each workplace where there is a possibility of an emergency. Appropriate portions of the plan shall be implemented in the event of an emergency.

(ii) The plan shall specifically provide that employees engaged in correcting emergency conditions shall be equipped with respiratory protection as required by paragraph (g) of this section until the emergency is abated.

(iii) The plan shall include the elements prescribed in 29 CFR 1910.38, "Employee emergency plans and fire prevention plans."

(2) *Alerting employees.* Where there is the possibility of employee exposure to EtO due to an emergency, means shall be developed to alert potentially affected employees of such occurrences promptly. Affected employees shall be immediately evacuated from the area in the event that an emergency occurs.

TABLE 1—MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION FOR AIRBORNE ETO

Condition of use or concentration of airborne EtO (ppm)	Minimum required respirator
Equal to or less than 50.	(a) Full facepiece respirator with EtO approved canister, front-or back-mounted.
Equal to or less than 2,000.	(a) Positive-pressure supplied air respirator, equipped with full facepiece, hood, or helmet, or (b) Continuous-flow supplied air respirator (positive pressure) equipped with hood, helmet or suit.
Concentration above 2,000 or unknown concentration (such as in emergencies).	(a) Positive-pressure self-contained breathing apparatus (SCBA), equipped with full facepiece, or (b) Positive-pressure full facepiece supplied air respirator equipped with an auxiliary positive-pressure self-contained breathing apparatus.
Firefighting	(a) Positive pressure self-contained breathing apparatus equipped with full facepiece.

TABLE 1—MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION FOR AIRBORNE ETO—Continued

Condition of use or concentration of airborne EtO (ppm)	Minimum required respirator
Escape	(a) Any respirator described above.

Note.—Respirators approved for use in higher concentrations are permitted to be used in lower concentrations.

(i) *Medical surveillance*—(1) *General*—(i) *Employees covered.* (A) The employer shall institute a medical surveillance program for all employees who are or may be exposed to EtO at or above the action level, without regard to the use of respirators, for at least 30 days a year.

(B) The employer shall make available medical examinations and consultations to all employees who have been exposed to EtO in an emergency situation.

(ii) *Examination by a physician.* The employer shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician, and are provided without cost to the employee, without loss of pay, and at a reasonable time and place.

(2) *Medical examinations and consultations.* (i) Frequency. The employer shall make available medical examinations and consultations to each employee covered under paragraph (i)(1)(i) of this section on the following schedules:

(A) Prior to assignment of the employee to an area where exposure may be at or above the action level for at least 30 days a year.

(B) At least annually each employee exposed at or above the action level for at least 30 days in the past year.

(C) At termination of employment or reassignment to an area where exposure to EtO is not at or above the action level for at least 30 days a year.

(D) As medically appropriate for any employee exposed during an emergency.

(E) As soon as possible, upon notification by an employee either (1) that the employee has developed signs or symptoms indicating possible overexposure to EtO, or (2) that the employee desires medical advice concerning the effects of current or past exposure to EtO on the employee's ability to produce a healthy child.

(F) If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall

provide such examinations to affected employees at the frequencies recommended by the physician.

(ii) *Content.* (A) Medical examinations made available pursuant to paragraphs (i)(2)(i)(A)–(D) of this section shall include:

(*1*) A medical and work history with special emphasis directed to symptoms related to the pulmonary, hematologic, neurologic, and reproductive systems and to the eyes and skin.

(*2*) A physical examination with particular emphasis given to the pulmonary, hematologic, neurologic, and reproductive systems and to the eyes and skin.

(*3*) A complete blood count to include at least a white cell count (including differential cell count), red cell count, hematocrit, and hemoglobin.

(*4*) Any laboratory or other test which the examining physician deems necessary by sound medical practice.

(B) The content of medical examinations or consultation made available pursuant to paragraph (i)(2)(i)(E) of this section shall be determined by the examining physician, and shall include pregnancy testing or laboratory evaluation of fertility, if requested by the employee and deemed appropriate by the physician.

(3) *Information provided to the physician.* The employer shall provide the following information to the examining physician:

(i) A copy of this standard and Appendices A, B, and C.

(ii) A description of the affected employee's duties as they relate to the employee's exposure.

(iii) The employee's representative exposure level or anticipated exposure level.

(iv) A description of any personal protective and respiratory equipment used or to be used.

(v) Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

(4) *Physician's written opinion.* (i) The employer shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination and shall include:

(A) The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to EtO;

(B) Any recommended limitations on the employee or upon the use of personal protective equipment such as clothing or respirators; and

(C) A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions resulting from EtO exposure that require further explanation or treatment.

(ii) The employer shall instruct the physician not to reveal in the written opinion given to the employer specific findings or diagnoses unrelated to occupational exposure to EtO.

(iii) The employer shall provide a copy of the physician's written opinion to the affected employee within 15 days from its receipt.

(j) *Communication of EtO hazards to employees*—(1) *Signs and labels.* (i) The employer shall post and maintain legible signs demarcating regulated areas and entrances or accessways to regulated areas that bear the following legend:

DANGER
ETHYLENE OXIDE
CANCER HAZARD AND REPRODUCTIVE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING MAY BE REQUIRED
TO BE WORN IN THIS AREA

(ii) The employer shall ensure that precautionary labels are affixed to all containers of EtO whose contents are capable of causing employee exposure at or above the action level or whose contents may reasonably be foreseen to cause employee exposure above the excursion limit, and that the labels remain affixed when the containers of EtO leave the workplace. For the purpose of this paragraph, reaction vessels, storage tanks, and pipes or piping systems are not considered to be containers. The labels shall comply with the requirements of 29 CFR 1915.1200(f) of OSHA's Hazard Communication standard, and shall include the following legend:

(A)

DANGER
ETHYLENE OXIDE
CANCER HAZARD AND REPRODUCTIVE HAZARD

and

(B) A warning statement against breathing airborne concentrations of EtO.

(iii) The labeling requirements under this section do not apply where EtO is used as a pesticide, as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when it is labeled pursuant to that Act and regulations issued under that Act by the Environmental Protection Agency.

(2) *Material safety data sheets.* Employers who are manufacturers or importers of EtO shall comply with the requirements regarding development of material safety data sheets as specified in 29 CFR 1915.1200(g) of OSHA's Hazard Communication standard.

(3) *Information and training.* (i) The employer shall provide employees who are potentially exposed to EtO at or above the action level or above the excursion limit with information and training on EtO at the time of initial assignment and at least annually thereafter.

(ii) Employees shall be informed of the following:

(A) The requirements of this section with an explanation of its contents, including Appendices A and B;

(B) Any operations in their work area where EtO is present;

(C) The location and availability of the written EtO final rule; and

(D) The medical surveillance program required by paragraph (i) of this section with an explanation of the information in Appendix C.

(iii) Employee training shall include at least:

(A) Methods and observations that may be used to detect the presence or release of EtO in the work area (such as monitoring conducted by the employer, continuous monitoring devices, etc.);

(B) The physical and health hazards of EtO;

(C) The measures employees can take to protect themselves from hazards associated with EtO exposure, including specific procedures the employer has implemented to protect employees from exposure to EtO, such as work practices, emergency procedures, and personal protective equipment to be used; and

(D) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and how employees can obtain and use the appropriate hazard information.

(k) *Recordkeeping*—(1) *Objective data for exempted operations.* (i) Where the processing, use, or handling of products made from or containing EtO are exempted from other requirements of this section under paragraph (a)(2) of this section, or where objective data have been relied on in lieu of initial monitoring under paragraph (d)(2)(ii) of this section, the employer shall establish and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

(ii) This record shall include at least the following information:

(A) The product qualifying for exemption;

(B) The source of the objective data;

(C) The testing protocol, results of testing, and/or analysis of the material for the release of EtO;

(D) A description of the operation exempted and how the data support the exemption; and

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) *Exposure measurements.* (i) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to EtO as prescribed in paragraph (d) of this section.

(ii) This record shall include at least the following information:

(A) The date of measurement;

(B) The operation involving exposure to EtO which is being monitored;

(C) Sampling and analytical methods used and evidence of their accuracy;

(D) Number, duration, and results of samples taken;

(E) Type of protective devices worn, if any; and

(F) Name, social security number and exposure of the employees whose exposures are represented.

(iii) The employer shall maintain this record for at least thirty (30) years, in accordance with 29 CFR 1915.1120.

(3) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (i)(1)(i) of this section, in accordance with 29 CFR 1915.1120.

(ii) The record shall include at least the following information:

(A) The name and social security number of the employee;

(B) Physicians' written opinions;

(C) Any employee medical complaints related to exposure to EtO; and

(D) A copy of the information provided to the physician as required by paragraph (i)(3) of this section.

(iii) The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR 1915.1120.

(4) *Availability.* (i) The employer, upon written request, shall make all records required to be maintained by this section available to the Assistant Secretary and the Director for examination and copying.

(ii) The employer, upon request, shall make any exemption and exposure records required by paragraphs (k) (1) and (2) of this section available for examination and copying to affected employees, former employees, designated representatives and the Assistant Secretary, in accordance with 29 CFR 1915.1120 (a) through (e) and (g) through (i).

(iii) The employer, upon request, shall make employee medical records required by paragraph (k)(3) of this section available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Assistant Secretary, in accordance with 29 CFR 1915.1120.

(5) *Transfer of records.* (i) The employer shall comply with the requirements concerning transfer of records set forth in 29 CFR 1915.1120(h).

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director at least 90 days prior to disposal and transmit them to the Director.

(l) *Observation of monitoring*—(1) *Employee observation.* The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to EtO conducted in accordance with paragraph (d) of this section.

(2) *Observation procedures.* When observation of the monitoring of employee exposure to EtO requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(m) *Dates*—(1) *(i) Effective date.* The paragraphs contained in this section shall become effective August 21, 1984, except for paragraphs (a)(2), (d), (e), (f)(2), (g)(3), (h), (i), and (j) which shall become effective on March 12, 1985.

(ii) The requirements in this section which pertain only to or are triggered by the excursion limit shall become effective June 6, 1988, except for the excursion limit provisions in paragraphs (a)(2), (d), (f)(2), (g)(3) and (j) of this section which shall become effective August 25, 1988.

(2) *Start-up dates.* (i) The start-up date for the requirements in those paragraphs that were effective on August 21, 1984, including institution of work practice controls specified in paragraph (f)(1), shall be February 19, 1985, except as provided for in paragraph (m)(2)(ii), and the start-up date for paragraphs (a)(2), (d), (e), (f)(2), (g)(3), (h), (i), and (j) of this section shall be September 9, 1985.

(ii) Engineering controls specified by paragraph (f)(1) of this section shall be implemented by August 21, 1985.

(iii) Compliance with the requirements in this section which pertain only to or are triggered by the excursion limit shall be by September 6, 1988, except for compliance with the excursion limit provisions of paragraphs (a)(2), (d), (f)(2), (g)(3), and (j) of this section, which shall be by October 6, 1988, and implementation of engineering controls specified for compliance with the excursion limit, which shall be by December 6, 1988.

(3) *Labeling.* (i) Paragraph (j)(1)(ii)(A) of this section as amended is effective January 9, 1986.

(ii) Paragraph (j)(1)(iii) of this is effective October 11, 1985.

(n) *Appendices.* The information contained in the appendices is not intended by itself to create any additional obligations not otherwise imposed or to detract from any existing obligation.

(Approved by the Office of Management and Budget under control number 1218–0108)

Appendix A to § 1915.1047—Substance Safety Data Sheet for Ethylene Oxide (Non-Mandatory)

I. substance identification

A. Substance: Ethylene oxide (C_2H_4O).

B. Synonyms: dihydrooxirene, dimethylene oxide, EO, 1,2-epoxyethane, EtO, ETO, oxacyclopropane, oxane, oxidoethane, alpha/beta-oxidoethane, oxiran, oxirane.

C. Ethylene oxide can be found as a liquid or vapor.

D. EtO is used in the manufacture of ethylene glycol, surfactants, ethanolamines, glycol ethers, and other organic chemicals. EtO is also used as a sterilant and fumigant.

E. Appearance and odor: Colorless liquid below 10.7 °C (51.3 °F) or colorless gas with ether-like odor detected at approximately 700 parts EtO per million parts of air (700 ppm).

F. Permissible Exposure: Exposure may not exceed 1 part EtO per million parts of air averaged over the 8-hour workday.

II. health hazard data

A. Ethylene oxide can cause bodily harm if you inhale the vapor, if it comes into contact with your eyes or skin, or if you swallow it.

B. Effects of overexposure:

1. Ethylene oxide in liquid form can cause eye irritation and injury to the cornea, frostbite, and severe irritation and blistering of the skin upon prolonged or confined contact. Ingestion of EtO can cause gastric irritation and liver injury. Acute effects from inhalation of EtO vapors include respiratory irritation and lung injury, headache, nausea, vomiting, diarrhea, shortness of breath, and cyanosis (blue or purple coloring of skin). Exposure has also been associated with the occurrence of cancer, reproductive effects, mutagenic changes, neurotoxicity, and sensitization.

1. EtO has been shown to cause cancer in laboratory animals and has been associated with higher incidences of cancer in humans. Adverse reproductive effects and chromosome damage may also occur from EtO exposure.

a. Reporting signs and symptoms: You should inform your employer if you develop any signs or symptoms and suspect that they are caused by exposure to EtO.

III. emergency first aid procedures

A. Eye exposure: If EtO gets into your eyes, wash your eyes immediately with large amounts of water, lifting the lower and upper eyelids. Get medical attention immediately. Contact lenses should not be worn when working with this chemical.

B. Skin exposure: If EtO gets on your skin, immediately wash the contaminated skin with water. If EtO soaks through your clothing, especially your shoes, remove the clothing immediately and wash the skin with water using an emergency deluge shower. Get medical attention immediately. Thoroughly wash contaminated clothing before reusing. Contaminated leather shoes or other leather articles should not be reused and should be discarded.

C. Inhalation: If large amounts of EtO are inhaled, the exposed person must be moved to fresh air at once. If breathing has stopped, perform cardiopulmonary resuscitation. Keep the affected person warm and at rest. Get medical attention immediately.

D. Swallowing: When EtO has been swallowed, give the person large quantities of water immediately. After the water has been swallowed, try to get the person to vomit by having him or her touch the back of the throat with his or her finger. Do not make an unconscious person vomit. Get medical attention immediately.

E. Rescue: Move the affected person from the hazardous exposure. If the exposed person has been overcome, attempt rescue only after notifying at least one other person of the emergency and putting into effect established emergency procedures. Do not become a casualty yourself. Understand your emergency rescue procedures and know the location of the emergency equipment before the need arises.

IV. respirators and protective clothing

A. Respirators: You may be required to wear a respirator for nonroutine activities, in emergencies, while your employer is in the process of reducing EtO exposures through engineering controls, and where engineering controls are not feasible. As of the effective date of the standard, only air supplied positive-pressure, full-facepiece respirators are approved for protection against EtO. If air-purifying respirators are worn in the future, they must have a joint Mine Safety and Health Administration (MSHA) and National Institute for Occupational Safety and Health (NIOSH) label of approval for use with ethylene oxide. For effective protection, respirators must fit your face and head snugly. Respirators should not be loosened or removed in work situations where their use is required.

EtO does not have a detectable odor except at levels well above the permissible exposure limits. If you can smell EtO while wearing a respirator, proceed immediately to fresh air. If you experience difficulty breathing while wearing a respirator, tell your employer.

B. Protective clothing: You may be required to wear impermeable clothing, gloves, a face shield, or other appropriate protective clothing to prevent skin contact with liquid EtO or EtO-containing solutions. Where protective clothing is required, your employer must provide clean garments to you as necessary to assure that the clothing protects you adequately.

Replace or repair protective clothing that has become torn or otherwise damaged.

EtO must never be allowed to remain on the skin. Clothing and shoes which are not impermeable to EtO should not be allowed to become contaminated with EtO, and if they do, the clothing should be promptly removed and decontaminated. Contaminated leather shoes should be discarded. Once EtO penetrates shoes or other leather articles, they should not be worn again.

C. Eye protection: You must wear splashproof safety goggles in areas where liquid EtO or EtO-containing solutions may contact your eyes. In addition, contact lenses should not be worn in areas where eye contact with EtO can occur.

V. precautions for safe use, handling, and storage

A. EtO is a flammable liquid, and its vapors can easily form explosive mixtures in air.

B. EtO must be stored in tighly closed containers in a cool, well-ventilated area, away from heat, sparks, flames, strong oxidizers, alkalines, and acids, strong bases, acetylide-forming metals such as cooper, silver, mercury and their alloys.

C. Sources of ignition such as smoking material, open flames and some electrical devices are prohibited wherever EtO is handled, used, or stored in a manner that could create a potential fire or explosion hazard.

D. You should use non-sparking tools when opening or closing metal containers of EtO, and containers must be bonded and grounded in the rare instances in which liquid EtO is poured or transferred.

E. Impermeable clothing wet with liquid EtO or EtO-containing solutions may be easily ignited. If your are wearing impermeable clothing and are splashed with liquid EtO or EtO-containing solution, you should immediately remove the clothing while under an emergency deluge shower.

F. If your skin comes into contact with liquid EtO or EtO-containing solutions, you should immediately remove the EtO using an emergency deluge shower.

G. You should not keep food, beverages, or smoking materials in regulated areas where employee exposures are above the permissible exposure limits.

H. Fire extinguishers and emergency deluge showers for quick drenching should be readily available, and you should know where they are and how to operate them.

I. Ask your supervisor where EtO is used in your work area and for any additional plant safety and health rules.

VI. access to information

A. Each year, your employer is required to inform you of the information contained in this standard and appendices for EtO. In addition, your employer must instruct you in the proper work practices for using EtO emergency procedures, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to EtO. You or your representative has the right to observe employee measurements and to record the results obtained. Your employer is required to inform you of your exposure. If your employer determine that you are being overexposed, he or she is required to inform you of the actions which are being taken to reduce your exposure to within permissible exposure limits.

C. Your employer is required to keep records of your exposures and medical examinations. These exposure records must be kept by the employer for at least thirty (30) years. Medical records must be kept for the period of your employment plus thirty (30) years.

D. Your employer is required to release your exposure and medical records to your physician or designated representative upon your written request.

VII. sterilant use of eto in hospitals and health care facilities

This section of Appendix A, for informational purposes, sets forth EPA's recommendations for modifications in workplace design and practice in hospitals and health care facilities for which the Environmental Protection Agency has registered EtO for uses as a sterilant or fumigant under the Federal Insecticide, Funigicide, and Rodenticide Act, 7 U.S.C. 136 *et seq.* These new recommendations, published in the **Federal Register** by EPA at 49 FR 15268, as modified in today's Register, are intended to help reduce the exposure of hospital and health care workers to EtO to 1 ppm. EPA's recommended workplace design and workplace practice are as follows:

1. Workplace Design

a. *Installation of gas line hand valves.* Hand valves must be installed on the gas supply line at the connection to the supply cylinders to minimize leakage during cylinder change.

b. *Installation of capture boxes.* Sterilizer operations result in a gas/water discharge at the completion of the process. This discharge is routinely piped to a floor drain which is generally located in an equipment or an adjacent room. When the floor drain is not in the same room as the sterilizer and workers are not normally present, all that is necessary is that the room be well ventilated.

The installation of a "capture box" will be required for those work place layouts where the floor drain is located in the same room as the sterilizer or in a room where workers are normally present. A "capture box" is a piece of equipment that totally encloses the floor drain where the discharge from the sterilizer is pumped. The "capture box" is to be vented directly to a non-recirculating or dedicated ventilation system. Sufficient air intake should be allowed at the bottom of the box to handle the volume of air that is ventilated from the top of the box. The "capture box" can be made of metal, plastic, wood or other equivalent material. The box is intended to reduce levels of EtO discharged into the work room atmosphere.

The use of a "capture box" is not required if: (1) The vacuum pump discharge floor drain is located in a well ventilated equipment or other room where workers are not normally present or (2) the water sealed vacuum pump discharges directly to a closed sealed sewer line (check local plumbing codes).

If it is impractical to install a vented "capture box" and a well ventilated equipment or other room is not feasible, a box that can be sealed over the floor drain may be used if: (1) The floor drain is located in a room where workers are not normally present and EtO cannot leak into an occupied area, and (2) the sterilizer in use is less than 12 cubic feet in capacity (check local plumbing codes).

c. *Ventilation of aeration units* i. *Existing aeration units.* Existing units must be vented to a non-recirculating or dedicated system or vented to an equipment or other room where workers are not normally present and which is well ventilated. Aerator units must be positioned as close as possible to the sterilizer to minimize the exposure from the off-gassing of sterilized items.

ii. *Installation of new aerator units (where none exist).* New aerator units must be vented as described above for existing aerators. Aerators must be in place by July 1, 1986.

d. *Ventilation during cylinder change.* Workers may be exposed to short but relatively high levels of EtO during the change of gas cylinders. To reduce exposure from this route, users must select one of three alternatives designed to draw off gas that may be released when the line from the sterilizer to the cylinder is disconnected:

i. Location of cylinders in a well ventilated equipment room or other room where workers are not normally present.

ii. Installation of a flexible hose (at least 4" in diameter) to a non-recirculating or dedicated ventilation system and located in the area of cylinder change in such a way that the hose can be positioned at the point where the sterilizer gas line is disconnected from the cylinder.

iii. Installation of a hood that is part of a non-recirculating or dedicated system and positioned no more than one foot above the point where the change of cylinders takes place.

e. *Ventilation of sterilizer door area.* One of the major sources of exposure to EtO occurs when the sterilizer door is opened following the completion of the sterilization process. In order to reduce this avenue of exposure, a hood or metal canopy closed on each end must be installed over the sterilizer door. The hood or metal canopy must be connected to a non-recirculating or dedicated ventilation system or one that exhausts gases to a well ventilated equipment or other room where workers are not normally present. A hood or canopy over the sterilizer door is required for use even with those sterilizers that have a purge cycle and must be in place by July 1, 1986.

f. *Ventilation of sterilizer relief valve.* Sterilizers are typically equipped with a safety relief device to release gas in case of increased pressure in the sterilizer. Generally, such relief devices are used on pressure vessels. Although these pressure relief devices are rarely opened for hospital and health care sterilizers, it is suggested that they be designed to exhaust vapor from the sterilizer by one of the following methods:

i. Through a pipe connected to the outlet of the relief valve ventilated directly outdoors at a point high enough to be away from passers by, and not near any windows that open, or near any air conditioning or ventilation air intakes.

ii. Through a connection to an existing or new non-recirculating or dedicated ventilation system.

iii. Through a connection to a well ventilated equipment or other room where workers are not normally present.

g. *Ventilation systems.* Each hospital and health care facility affected by this notice that uses EtO for the sterilization of equipment and supplies must have a ventilation system which enables compliance with the requirements of section (b) through (f) in the manner described in these sections and within the timeframes allowed. Thus, each affected hospital and health care facility must have or install a non-recirculating or dedicated ventilation equipment or other room where workers are not normally present in which to vent EtO.

h. *Installation of alarm systems.* An audible and visual indicator alarm system must be installed to alert personnel of ventilation system failures, i.e., when the ventilation fan motor is not working.

2. Workplace Practices

All the workplace practices discussed in this unit must be permanently posted near the door of each sterilizer prior to use by any operator.

a. *Changing of supply line filters.* Filters in the sterilizer liquid line must be changed when necessary, by the following procedure:

i. Close the cylinder valve and the hose valve.

ii. Disconnect the cylinder hose (piping) from the cylinder.

iii. Open the hose valve and bleed slowly into a proper ventilating system at or near the in-use supply cylinders.

iv. Vacate the area until the line is empty.

v. Change the filter.

vi. Reconnect the lines and reverse the value position.

vii. Check hoses, filters, and valves for leaks with a fluorocarbon leak detector (for those sterilizers using the 88 percent chlorofluorocarbon, 12 percent ethylene oxide mixture (12/88)).

b. *Restricted access area.* i. Areas involving use of EtO must be designated as restricted access areas. They must be identified with signs or floor marks near the sterilizer door, aerator, vacuum pump floor drain discharge, and in-use cylinder storage.

ii. All personnel must be excluded from the restricted area when certain operations are in progress, such as discharging a vacuum pump, emptying a sterilizer liquid line, or venting a non-purge sterilizer with the door ajar or other operations where EtO might be released directly into the face of workers.

c. *Door opening procedures.* i. *Sterilizers with purge cycles.* A load treated in a sterilizer equipped with a purge cycle should be removed immediately upon completion of the cycle (provided no time is lost opening the door after cycle is completed). If this is not done, the purge cycle should be repeated before opening door.

ii. *Sterilizers without purge cycles.* For a load treated in a sterilizer not equipped with a purge cycle, the sterilizer door must be ajar 6" for 15 minutes, and then fully opened for at least another 15 minutes before removing the treated load. The length of time of the second period should be established by peak monitoring for one hour after the two 15-minute periods suggested. If the level is above 10 ppm time-weighted average for 8 hours, more time should be added to the second waiting period (door wide open). However, in no case may the second period be shortened to less than 15 minutes.

d. *Chamber unloading procedures.* i. Procedures for unloading the chamber must include the use of baskets or rolling carts, or baskets and rolling tables to transfer treated loads quickly, thus avoiding excessive contact with treated articles, and reducing the duration of exposures.

ii. If rolling carts are used, they should be pulled not pushed by the sterilizer operators to avoid offgassing exposure.

e. *Maintenance.* A written log should be instituted and maintained documenting the date of each leak detection and any maintenance procedures undertaken. This is a suggested use practice and is not required.

i. *Leak detection.* Sterilizer door gaskets, cylinder and vacuum piping, hoses, filters, and valves must be checked for leaks under full pressure with a Fluorocarbon leak detector (for 12/88 systems only) every two weeks by maintenance personnel. Also, the cylinder piping connections must be checked after changing cylinders. Particular attention in leak detection should be given to the automatic solenoid valves that control the flow of EtO to the sterilizer. Specifically, a check should be made at the EtO gasline entrance port to the sterilizer, while the sterilizer door is open and the solenoid valves are in a closed position.

ii. *Maintenance procedures.* Sterilizer/areator door gaskets, valves, and fittings must be replaced when necessary as determined by maintenance personnel in their bi-weekly checks; in addition, visual inspection of the door gaskets for cracks, debris, and other foreign substances should be conducted daily by the operator.

Appendix B to § 1915.1047—Substance Technical Guidelines for Ethylene Oxide (Non-Mandatory)

I. physical and chemical data

A. Substance identification:

1. Synonyms: dihydrooxirene, dimethylene oxide, EO, 1,2-epoxyethane, EtO ETO oxacyclopropane, oxane, oxidoethane, alpha/beta-oxidoethane, oxiran, oxirane.

2. Formula: (C_2H_4O).

3. Molecular weight: 44.06

B. Physical data:

1. Boiling point (760 mm Hg): 10.70°C (51.3°F);

2. Specific gravity (water = 1): 0.87 (at 20°C or 68°F)

3. Vapor density (air = 1): 1.49;

4. Vapor pressure (at 20°C); 1,095 mm Hg;

5. Solubility in water: complete;

6. Appearance and odor: colorless liquid; gas at temperature above 10.7°F or 51.3°C with ether-like odor above 700 ppm.

II. fire, explosion, and reactivity hazard data

A. Fire:

1. Flash point: less than 0°F (open cup);

2. Stability: decomposes violently at temperatures above 800°F;

3. Flammable limits in air, percent by volume: Lower: 3, Upper: 100;

4. Extinguishing media: Carbon dioxide for small fires, polymer or alcohol foams for large fires;

5. Special fire fighting procedures: Dilution of ethylene oxide with 23 volumes of water renders it non-flammable;

6. Unusual fire and explosion hazards: Vapors of EtO will burn without the presence of air or other oxidizers. EtO vapors are heavier than air and may travel along the ground and be ignited by open flames or sparks at locations remote from the site at which EtO is being used.

7. For purposes of compliance with the requirements of 29 CFR 1910.106, EtO is classified as a flammable gas. For example, 7,500 ppm, approximately one-fourth of the lower flammable limit, would be considered to pose a potential fire and explosion hazard.

8. For purposes of compliance with 29 CFR 1910.155, EtO is classified as a Class B fire hazard.

9. For purpose of compliance with 29 CFR 1919.307, locations classified as hazardous due to the presence of EtO shall be Class I.

B. Reactivity:

1. Conditions contributing to instability: EtO will polymerize violently if contaminated with aqueous alkalies, amines, mineral acids, metal chlorides, or metal oxides. Violent decomposition will also occur at temperatures above 800 °F;

2. Incompatabilities: Alkalines and acids;

3. Hazardous decomposition products: Carbon monoxide and carbon dioxide.

III. spill, leak, and disposal procedures

A. If EtO is spilled or leaked, the following steps should be taken:

1. Remove all ignition sources.

2. The area should be evacuated at once and re-entered only after the area has been thoroughly ventilated and washed down with water.

B. Persons not wearing appropriate protective equipment should be restricted from areas of spills or leaks until cleanup has been completed.

C. Waste disposal methods: Waste material should be disposed of in a manner that is not hazardous to employees or to the general population. In selecting the method of waste disposal, applicable local, State, and Federal regulations should be consulted.

IV. monitoring and measurement procedures

A. Exposure above the Permissible Exposure Limit:

1. Eight-hour exposure evaluation: Measurements taken for the purpose of determining employee exposure under this section are best taken with consecutive samples covering the full shift. Air samples should be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee.)

2. Monitoring techniques: The sampling and analysis under this section may be performed by collection of the EtO vapor on charcoal adsorption tubes or other composition adsorption tubes, with subsequent chemical analysis. Sampling and analysis may also be performed by instruments such as real-time continuous monitoring systems, portable direct reading instruments, or passive dosimeters as long as measurements taken using these methods accurately evaluate the concentration of EtO in employees' breathing zones.

Appendix D describes the validated method of sampling and analysis which has been tested by OSHA for use with EtO. Other available methods are also described in Appendix D. The employer has the obligation of selecting a monitoring method which meets the accuracy and precision requirements of the standard under his unique field conditions. The standard requires that the method of monitoring should be accurate, to a 95 percent confidence level, to plus or minus 25 percent for concentrations of EtO at 1 ppm, and to plus or minus 35 percent for concentrations at 0.5 ppm. In addition to the method described in Appendix D, there are numerous other methods available for monitoring for EtO in the workplace. Details on these other methods have been submitted by various companies to the rulemaking record, and are available at the OSHA Docket Office.

B. Since many of the duties relating to employee exposure are dependent on the results of measurement procedures, employers should assure that the evaluation of employee exposures is performed by a technically qualified person.

V. protective clothing and equipment

Employees should be provided with and be required to wear appropriate protective clothing wherever there is significant potential for skin contact with liquid EtO or EtO-containing solutions. Protective clothing shall include impermeable coveralls or similar full-body work clothing, gloves, and head coverings, as appropriate to protect areas of the body which may come in contact with liquid EtO or EtO-containing solutions.

Employers should ascertain that the protective garments are impermeable to EtO. Permeable clothing, including items made of rubber, and leather shoes should not be allowed to become contaminated with liquid EtO. If permeable clothing does become contaminated, it should be immediately removed, while the employer is under an emergency deluge shower. If leather footwear or other leather garments become wet from EtO they should be discarded and not be worn again, because leather absorbs EtO and holds it against the skin.

Any protective clothing that has been damaged or is otherwise found to be defective should be repaired or replaced. Clean protective clothing should be provided to the employee as necessary to assure employee protection. Whenever impermeable clothing becomes wet with liquid EtO, it should be washed down with water before being removed by the employee. Employees are also required to wear splash-proof safety goggles where there is any possibility of EtO contacting the eyes.

VI. miscellaneous precautions

A. Store EtO in tightly closed containers in a cool, well-ventilated area and take all necessary precautions to avoid any explosion hazard.

B. Non-sparking tools must be used to open and close metal containers. These containers must be effectively grounded and bonded.

C. Do not incinerate EtO cartridges, tanks or other containers.

D. Employers should advise employees of all areas and operations where exposure to EtO occur.

VII. common operations

Common operations in which exposure to EtO is likely to occur include the following: Manufacture of EtO, surfactants, ethanolamines, glycol ethers, and specialty chemicals, and use as a sterilant in the hospital, health product and spice industries.

Appendix C to § 1915.1047—Medical Surveillance Guidelines for Ethylene Oxide (Non-Mandatory)

I. route of entry

Inhalation.

II. toxicology

Clinical evidence of adverse effects associated with the exposure to EtO is present in the form of increased incidence of cancer in laboratory animals (leukemia, stomach, brain), mutation in offspring in animals, and resorptions and spontaneous abortions in animals and human populations respectively. Findings in humans and experimental animals exposed to airborne concentrations of EtO also indicate damage to the genetic material (DNA). These include hemoglobin alkylation, unsecheduled DNA synthesis, sister chromatid exchange chromosomal aberration, and functional sperm abnormalities.

Ethylene oxide in liquid form can cause eye irritation and injury to the cornea, frostbite, severe irritation, and blistering of the skin upon prolonged or confined contact. Ingestion of EtO can cause gastric irritation and liver injury: Other effects from inhalation of EtO vapors include respiratory irritation and lung injury, headache, nausea, vomiting, diarrhea, dyspnea and cyanosis.

III. signs and symptoms of acute overexposure

The early effects of acute overexposure to EtO are nausea and vomiting, headache, and irritation of the eyes and respiratory passages. The patient may notice a "peculiar taste" in the mouth. Delayed effects can include pulmonary edema, drowsiness, weakness, and incoordination. Studies suggest that blood cell changes, an increase in chromosomal aberrations, and spontaneous abortion may also be causally related to acute overexposure to EtO.

Skin contact with liquid or gaseous EtO causes characteristic burns and possibly even an allergic-type sensitization. The edema and erythema occurring from skin contact with EtO progress to vesiculation with a tendency

to coalesce into blebs with desquamation. Healing occurs within three weeks, but there may be a residual brown pigmentation. A 40–80% solution is extremely dangerous, causing extensive blistering after only brief contact. Pure liquid EtO causes frostbite because of rapid evaporation. In contrast, the eye is relatively insensitive to EtO, but there may be some irritation of the cornea.

Most reported acute effects of occupational exposure to EtO are due to contact with EtO in liquid phase. The liquid readily penetrates rubber and leather, and will produce blistering if clothing or footwear contaminated with EtO are not removed.

IV. surveillance and preventive considerations

As noted above, exposure to EtO has been linked to an increased risk of cancer and reproductive effects including decreased male fertility, fetotoxicity, and spontaneous abortion. EtO workers are more likely to have chromosomal damage than similar groups not exposed to EtO. At the present, limited studies of chronic effects in humans resulting from exposure to EtO suggest a causal association with leukemia. Animal studies indicate leukemia and cancers at other sites (brain, stomach) as well. The physician should be aware of the findings of these studies in evaluating the health of employees exposed to EtO.

Adequate screening tests to determine an employee's potential for developing serious chronic diseases, such as cancer, from exposure to EtO do not presently exist. Laboratory tests may, however, give evidence to suggest that an employee is potentially overexposed to EtO. It is important for the physician to become familiar with the operating conditions in which exposure to EtO is likely to occur. The physician also must become familiar with the signs and symptoms that indicate a worker is receiving otherwise unrecognized and unacceptable exposure to EtO. These elements are especially important in evaluating the medical and work histories and in conducting the physical exam. When an unacceptable exposure in an active employee is identified by the physician, measures taken by the employer to lower exposure should also lower the risk of serious long-term consequences.

The employer is required to institute a medical surveillance program for all employees who are or will be exposed to EtO at or above the action level (0.5 ppm) for at least 30 days per year, without regard to respirator use. All examinations and procedures must be performed by or under the supervision of a licensed physician at a reasonable time and place for the employee and at no cost to the employee.

Although broad latitude in prescribing specific tests to be included in the medical surveillance program is extended to the examining physician, OSHA requires inclusion of the following elements in the routine examination:

(i) Medical and work histories with special emphasis directed to symptoms related to the pulmonary, hematologic, neurologic, and reproductive systems and to the eyes and skin.

(ii) Physical examination with particular emphasis given to the pulmonary, hematologic, neurologic, and reproductive systems and to the eyes and skin.

(iii) Complete blood count to include at least a white cell count (including differential cell count), red cell count, hematocrit, and hemoglobin.

(iv) Any laboratory or other test which the examining physician deems necessary by sound medical practice.

If requested by the employee, the medical examinations shall include pregnancy testing or laboratory evaluation of fertility as deemed appropriate by the physician.

In certain cases, to provide sound medical advice to the employer and the employee, the physician must evaluate situations not directly related to EtO. For example, employees with skin diseases may be unable to tolerate wearing protective clothing. In addition those with chronic respiratory diseases may not tolerate the wearing of negative pressure (air purifying) respirators. Additional tests and procedures that will help the physician determine which employees are medically unable to wear such respirators should include: An evaluation of cardiovascular function, a baseline chest x-ray to be repeated at five year intervals, and a pulmonary function test to be repeated every three years. The pulmonary function test should include measurement of the employee's forced vital capacity (FVC), forced expiratory volume at one second (FEV1), as well as calculation of the ratios of FEV1 to FVC, and measured FVC and measured FEV1 to expected values corrected for variation due to age, sex, race, and height.

The employer is required to make the prescribed tests available at least annually to employees who are or will be exposed at or above the action level, for 30 or more days per year; more often than specified if recommended by the examining physician; and upon the employee's termination of employment or reassignment to another work area. While little is known about the long term consequences of high short-term exposures, it appears prudent to monitor such affected employees closely in light of existing health data. The employer shall provide physician recommended examinations to any employee exposed to EtO in emergency conditions. Likewise, the employer shall make available medical consultations including physician recommended exams to employees who believe they are suffering signs or symptoms of exposure to EtO.

The employer is required to provide the physician with the following informatin: a copy of this standard and its appendices; a description of the affected employee's duties as they relate to the employee exposure level; and information from the employee's previous medical examinations which is not readily available to the examining physician. Making this information available to the physician will aid in the evaluation of the employee's health in relation to assigned duties and fitness to wear personal protective equipment, when required.

The employer is required to obtain a written opinion from the examining physician containing the results of the medical examinations; the physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of his or her health from exposure to EtO; any recommended restrictions upon the employee's exposure to EtO, or upon the use of protective clothing or equipment such as respirators; and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions which require further explanation or treatment. This written opinion must not reveal specific findings or diagnoses unrelated to occupational exposure to EtO, and a copy of the opinion must be provided to the affected employee.

The purpose in requiring the examining physician to supply the employer with a written opinion is to provide the employer with a medical basis to aid in the determination of initial placement of employees and to assess the employee's ability to use protective clothing and equipment.

Appendix D to § 1915.1047—Sampling and Analytical Methods for Ethylene Oxide (Non-Mandatory)

A number of methods are available for monitoring employee exposures to EtO. Most of these involve the use of charcoal tubes and sampling pumps, followed by analysis of the samples by gas chromatograph. The essential differences between the charcoal tube methods include, among others, the use of different desorbing solvents, the use of different lots of charcoal, and the use of different equipment for analysis of the samples.

Besides charcoal, methods using passive dosimeters, gas sampling bags, impingers, and detector tubes have been utilized for determination of EtO exposure. In addition, there are several commercially available portable gas analyzers and monitoring units.

This appendix contains details for the method which has been tested at the OSHA Analytical Laboratory in Salt Lake City. Inclusion of this method in the appendix does not mean that this method is the only one which will be satisfactory. Copies of descriptions of other methods available are available in the rulemaking record, and may be obtained from the OSHA Docket Office. These include the Union Carbide, Dow Chemical, 3M, and DuPont methods, as well as NIOSH Method S–286. These methods are briefly described at the end of this appendix.

Employers who note problems with sample breakthrough using the OSHA or other charcoal methods should try larger charcoal tubes. Tubes of larger capacity are available. In addition, lower flow rates and shorter sampling times should be beneficial in minimizing breakthrough problems. Whatever method the employer chooses, he must assure himself of the method's accuracy and precision under the unique conditions present in his workplace.

Ethylene Oxide

Method No.: 30.
Matrix: Air.
Target Concentration: 1.0 ppm (1.8 mg/m^3).

Procedure: Samples are collected on two charcoal tubes in series and desorbed with 1% CS_2 in benzene. The samples are derivatized with HBr and treated with sodium carbonate. Analysis is done by gas chromatography with an electron capture detector.

Recommended Air Volume and Sampling Rate: 1 liter and 0.05 Lpm.

Detection Limit of the Overall Procedure: 13.3 ppb (0.024 mg/m³) (Based on 1.0 liter air sample).

Reliable Quantitation Limit: 52.2 ppb (0.094 mg/m³) (Based on 1.0 liter air sample).

Standard Error of Estimate: 6.59% (See Backup Section 4.6).

Special Requirements: Samples must be analyzed within 15 days of sampling date.

Status of Method: The sampling and analytical method has been subjected to the established evaluation procedures of the Organic Method Evaluations Branch.

Date: August 1981.

Chemist: Wayne D. Potter.

Organic Solvents Branch, OSHA Analytical Laboratory, Salt Lake City, Utah

1. General Discussion.

1.1 Background.

1.1.1 History of Procedure.

Ethylene oxide samples analyzed at the OSHA Laboratory have normally been collected on activated charcoal and desorbed with carbon disulfide. The analysis is performed with a gas chromatograph equipped with a FID (Flame ionization detector) as described in NIOSH Method S286 (Ref. 5.1). This method is based on a PEL of 50 ppm and has a detection limit of about 1 ppm.

Recent studies have prompted the need for a method to analyze and detect ethylene oxide at very low concentrations.

Several attempts were made to form an ultraviolet (UV) sensitive derivative with ethylene oxide for analysis with HPLC. Among those tested that gave no detectable product were: p-anisidine, methylimidazole, aniline, and 2,3,6-trichlorobenzoic acid. Each was tested with catalysts such as triethylamine, aluminum chloride, methylene chloride and sulfuric acid but no detectable derivative was produced.

The next derivatization attempt was to react ethylene oxide with HBr to form 2-bromoethanol. This reaction was successful. An ECD (electron capture detector) gave a very good response for 2-bromoethanol due to the presence of bromine. The use of carbon disulfide as the desorbing solvent gave too large a response and masked the 2-bromoethanol. Several other solvents were tested for both their response on the ECD and their ability to desorb ethylene oxide from the charcoal. Among those tested were toluene, xylene, ethyl benzene, hexane, cyclohexane and benzene. Benzene was the only solvent tested that gave a suitable response on the ECD and a high desorption. It was found that the desorption efficiency was improved by using 1% CS_2 with the benzene. The carbon disulfide did not significantly improve the recovery with the other solvents. SKC Lot 120 was used in all tests done with activated charcoal.

1.1.2 Physical Properties (Ref. 5.2–5.4).

Synonyms: Oxirane; dimethylene oxide, 1,2-epoxy-ethane; oxane; C_2H_4O; ETO;

Molecular Weight: 44.06

Boiling Point: 10.7 °C (51.3°)

Melting Point: −111 °C

Description: Colorless, flammable gas

Vapor Pressure: 1095 mm. at 20 °C

Odor: Ether-like odor

Lower Explosive Limits: 3.0% (by volume)

Flash Point (TOC): Below 0 °F

Molecular Structure: CH_2—CH_2

1.2 Limit Defining Parameters.

1.2.1 Detection Limit of the Analytical Procedure.

The detection limit of the analytical procedure is 12.0 picograms of ethylene oxide per injection. This is the amount of analyte which will give a peak whose height is five times the height of the baseline noise. (See Backup Data Section 4.1).

1.2.2 Detection Limit of the Overall Procedure.

The detection limit of the overall procedure is 24.0 ng of ethylene oxide per sample.

This is the amount of analyte spiked on the sampling device which allows recovery of an amount of analyte equivalent to the detection limit of the analytical procedure. (See Backup Data Section 4.2).

1.2.3 Reliable Quantitation Limit.

The reliable quantitation limit is 94.0 nanograms of ethylene oxide per sample. This is the smallest amount of analyte which can be quantitated within the requirements of 75% recovery and 95% confidence limits. (See Backup Data Section 4.2).

It must be recognized that the reliable quantitation limit and detection limits reported in the method are based upon optimization of the instrument for the smallest possible amount of analyte. When the target concentration of an analyte is exceptionally higher than these limits, they may not be attainable at the routine operating parameters. In this case, the limits reported on analysis reports will be based on the operating parameters used during the analysis of the samples.

1.2.4 Sensitivity.

The sensitivity of the analytical procedure over a concentration range representing 0.5 to 2 times the target concentration based on the recommended air volume is 34105 area units per µg/mL. The sensitivity is determined by the slope of the calibration curve (See Backup Data Section 4.3).

The sensitivity will vary somewhat with the particular instrument used in the analysis.

1.2.5 Recovery.

The recovery of analyte from the collection medium must be 75% or greater. The average recovery from spiked samples over the range of 0.5 to 2 times the target concentration is 88.0% (See Backup Section 4.4). At lower concentrations the recovery appears to be non-linear.

1.2.6 Precision (Analytical Method Only).

The pooled coefficient of variation obtained from replicate determination of analytical standards at 0.5X, 1X and 2X the target concentration is 0.036 (See Backup Data Section 4.5).

1.2.7 Precision (Overall Procedure).

The overall procedure must provide results at the target concentration that are 25% of better at the 95% confidence level. The precision at the 95% confidence level for the 15 day storage test is plus or minus 12.9% (See Backup Data Section 4.6).

This includes an additional plus or minus 5% for sampling error.

1.3 Advantages.

1.3.1 The sampling procedure is convenient.

1.3.2 The analytical procedure is very sensitive and reproducible.

1.3.3 Reanalysis of samples is possible.

1.3.4 Samples are stable for at least 15 days at room temperature.

1.3.5 Interferences are reduced by the longer GC retention time of the new derivative.

1.4 Disadvantages.

1.4.1 Two tubes in series must be used because of possible breakthrough and migration.

1.4.2 The precision of the sampling rate may be limited by the reproducibility of the pressure drop across the tubes. The pumps are usually calibrated for one tube only.

1.4.3 The use of benzene as the desorption solvent increases the hazards of analysis because of the potential carcinogenic effects of benzene.

1.4.4 After repeated injections there can be a buildup of residue formed on the electron capture detector which decreases sensitivity.

1.4.5 Recovery from the charcoal tubes appears to be nonlinear at low concentrations.

2. Sampling Procedure.

2.1 Apparatus.

2.1.1 A calibrated personal sampling pump whose flow can be determined within plus or minus 5% of the recommended flow.

2.1.2 SKC Lot 120 Charcoal tubes: glass tube with both ends flame sealed, 7 cm long with a 6 mm O.D. and a 4-mm I.D., containing 2 sections of coconut shell charcoal separated by a 2-mm portion of urethane foam. The adsorbing section contains 100 mg of charcoal, the backup section 50 mg. A 3-mm portion of urethane foam is placed between the outlet end of the tube and the backup section. A plug of silylated glass wool is placed in front of the adsorbing section.

2.2 Reagents.

2.2.1 None required.

2.3 Sampling Technique.

2.3.1 Immediately before sampling, break the ends of the charcoal tubes. All tubes must be from the same lot.

2.3.2 Connect two tubes in series to the sampling pump with a short section of flexible tubing. A minimum amount of tubing is used to connect the two sampling tubes together. The tube closer to the pump is used as a backup. This tube should be identified as the backup tube.

2.3.3 The tubes should be placed in a vertical position during sampling to minimize channeling.

2.3.4 Air being sampled should not pass through any hose or tubing before entering the charcoal tubes.

2.3.5 Seal the charcoal tubes with plastic caps immediately after sampling. Also, seal each sample with OSHA seals lengthwise.

2.3.6 With each batch of samples, submit at least one blank tube from the same lot used for samples. This tube should be subjected to exactly the same handling as the samples (break, seal, transport) except that no air is drawn through it.

2.3.7 Transport the samples (and corresponding paperwork) to the lab for analysis.

2.3.8 If bulk samples are submitted for analysis, they shoud be transported in glass containers with Teflon-lined caps. These samples must be mailed separately from the container used for the charcoal tubes.

2.4 Breakthrough.

2.4.1 The breakthrough (5% breakthrough) volume for a 3.0 mg/m ethylene oxide sample stream at approximately 85% relative humidity, 22°C and 633 mm is 2.6 liters sampled at 0.05 liters per minute. This is equivalent to 7.8 µg of ethylene oxide. Upon saturation of the tube it appeared that the water may be displacing ethylene oxide during sampling.

2.5 Desorption Efficiency.

2.5.1 The desorption efficiency, from liquid injection onto charcoal tubes, averaged 88.0% from 0.5 to 2.0 x the target concentration for a 1.0 liter air sample. At lower ranges it appears that the desorption efficiency is non-linear (See Backup Data Section 4.2).

2.5.2 The desorption efficiency may vary from one laboratory to another and also from one lot of charcoal to another. Thus, it is necessary to determine the desorption efficiency for a particular lot of charcoal.

2.6 Recommended Air Volume and Sampling Rate.

2.6.1 The recommended air volume is 1.0 liter.

2.6.2 The recommended maximum sampling rate is 0.05 Lpm.

2.7 Interferences.

2.7.1 Ethylene glycol and Freon 12 at target concentration levels did not interfere with the collection of ethylene oxide.

2.7.2 Suspected interferences should be listed on the sample data sheets.

2.7.3 The relative humidity may affect the sampling procedure.

2.8 Safety Precautions.

2.8.1 Attach the sampling equipment to the employee so that it does not interfere with work performance.

2.8.2 Wear safety glasses when breaking the ends of the sampling tubes.

2.8.3 If possible, place the sampling tubes in a holder so the sharp end is not exposed while sampling.

3. Analytical Method.

3.1 Apparatus.

3.1.1 Gas chromatograph equipped with a linearized electron capture detector.

3.1.2 GC column capable of separating the derivative of ethylene oxide (2-bromoethanol) from any interferences and the 1% CS_2 in benzene solvent. The column used for validation studies was: 10 ft x ⅛ inch stainless steel 20% SP-2100, .1% Carbowax 1500 on 100/120 Supelcoport.

3.1.3 An electronic integrator or some other suitable method of measuring peak areas.

3.1.4 Two milliliter vials with Teflon-lined caps.

3.1.5 Gas tight syringe—500 µL or other convenient sizes for preparing standards.

3.1.6 Microliter syringes—10 µL or other convenient sizes for diluting standards and 1 µL for sample injections.

3.1.7 Pipets for dispensing the 1% CS_2 in benzene solvent. The Glenco 1 mL dispenser is adequate and convenient.

3.1.8 Volumetric flasks—5 mL and other convenient sizes for preparing standards.

3.1.9 Disposable Pasteur pipets.

3.2 Reagents.

3.2.1 Benzene, reagent grade.

3.2.2 Carbon Disulfide, reagent grade.

3.2.3 Ethylene oxide, 99.7% pure.

3.2.4 Hydrobromic Acid, 48% reagent grade.

3.2.5 Sodium Carbonate, anhydrous, reagent grade.

3.2.6 Desorbing reagent, 99% Benzene/ 1% CS_2.

3.3 Sample Preparation.

3.3.1 The front and back sections of each sample are transferred to separate 2-mL vials.

3.3.2 Each sample is desorbed with 1.0 mL of desorbing reagent.

3.3.3 The vials are sealed immediately and allowed to desorb for one hour with occasional shaking.

3.3.4 Desorbing reagent is drawn off the charcoal with a disposable pipet and put into clean 2-mL vials.

3.3.5 One drop of HBr is added to each vial. Vials are resealed and HBr is mixed well with the desorbing reagent.

3.3.6 About 0.15 gram of sodium carbonate is carefully added to each vial. Vials are again resealed and mixed well.

3.4 Standard Preparation.

3.4.1 Standards are prepared by injecting the pure ethylene oxide gas into the desorbing reagent.

3.4.2 A range of standards are prepared to make a calibration curve. A concentration of 1.0 µL of ethylene oxide gas per 1 mL desorbing reagent is equivalent to 1.0 ppm air concentration (all gas volumes at 25°C and 760 mm) for the recommended 1 liter air sample. This amount is uncorrected for desorption efficiency (See Backup Data Section 4.2. for desorption efficiency corrections).

3.4.3 One drop of HBr per mL of standard is added and mixed well.

3.4.4 About 0.15 grams of sodium carbonate is carefully added for each drop of HBr (A small reaction will occur).

3.5 Analysis.

3.5.1 GC Conditions.

Nitrogen flow rate—10mL/min.
Injector Temperature—250° C
Detector Temperature—300° C
Column Temperature—100° C
Injection size—0.8 µL
Elution time—3.9 minutes

3.5.2 Peak areas are measured by an integrator or other suitable means.

3.5.3 The integrator results are in area units and a calibration curve is set up with concentration vs. area units.

3.6 Interferences.

3.6.1 Any compound having the same retention time of 2-bromoethanol is a potential interference. Possible interferences should be listed on the sample data sheets.

3.6.2 GC parameters may be changed to circumvent interferences.

3.6.3 There are usually trace contaminants in benzene. These contaminants, however, posed no problem of interference.

3.6.4 Retention time data on a single column is not considered proof of chemical identity. Samples over the 1.0 ppm target level should be confirmed by GC/Mass Spec or other suitable means.

3.7 Calculations

3.7.1 The concentration in µg/mL for a sample is determined by comparing the area of a particular sample to the calibration curve, which has been prepared from analytical standards.

3.7.2 The amount of analyte in each sample is corrected for desorption efficiency by use of a desorption curve.

3.7.3 Analytical results (A) from the two tubes that compose a particular air sample are added together.

3.7.4 The concentration for a sample is calculated by the following equation:

$$ETO, mg/m^3 = AXB/C$$

where:

A=µg/mL

B=desorption volume in milliliters

C=air volume in liters.

3.7.5 To convert mg/m^3 to parts per million (ppm) the following relationship is used:

$$ETO, ppm = mg/m^3 \times 24.45/44.05$$

where:

mg/m^3=results from 3.7.4

24.45=molar volume at 25 °C and 760mm Hg

44.05=molecular weight of ETO.

3.8 Safety Precautions

3.8.1 Ethylene oxide and benzene are potential carcinogens and care must be exercised when working with these compounds.

3.8.2 All work done with the solvents (preparation of standards, desorption of samples, etc.) should be done in a hood.

3.8.3 Avoid any skin contact with all of the solvents.

3.8.4 Wear safety glasses at all times.

3.8.5 Avoid skin contact with HBr because it is highly toxic and a strong irritant to eyes and skin.

4. Backup Data.

4.1 Detection Limit Data.

The detection limit was determined by injecting 0.8 µL of a 0.015 µg/mL standard of ethylene oxide into 1% CS_2 in benzene. The detection limit of the analytical procedure is taken to be 1.20×10^{-5} µg per injection. This is equivalent to 8.3 ppb (0.015 mg/m^3) for the recommended air volume.

4.2 Desorption Efficiency.

Ethylene oxide was spiked onto charcoal tubes and the following recovery data was obtained.

Amount spiked (µg)	Amount recovered (µg)	Percent recovery
4.5	4.32	96.0
3.0	2.61	87.0
2.25	2.025	90.0
1.5	1.365	91.0
1.5	1.38	92.0
.75	.6525	87.0
.375	.315	84.0
.375	.312	83.2
.1875	.151	80.5
.094	.070	74.5

At lower amounts the recovery appears to be non-linear.

4.3 Sensitivity Data.

The following data was used to determine the calibration curve.

Injection	0.5x.75 µg/mL	1x1.5 µg/mL	2x3.0 µg/mL
1	30904	59567	111778
2	30987	62914	106016
3	32555	58578	106122
4	32242	57173	109716
X	31672	59558	108408

Slope=34.105.

4.4 Recovery.

The recovery was determined by spiking ethylene oxide onto lot 120 charcoal tubes and desorbing with 1% CS_2 in Benzene. Recoveries were done at 0.5, 1.0, and 2.0 X the target concentration (1 ppm) for the recommended air volume.

PERCENT RECOVERY

Sample	0.5x	1.0x	2.0x
1	88.7	95.0	91.7
2	83.8	95.0	87.3
3	84.2	91.0	86.0
4	88.0	91.0	83.0
5	88.0	86.0	85.0
X	86.5	90.5	87.0

Weighted Average=88.2.

4.5 Precision of the Analytical Procedure.

The following data was used to determine the precision of the analytical method:

Concentration	0.5x.75 µg/mL	1x1.5 µg/mL	2x3.0 µg/mL
Injection	.7421	1.4899	3.1184
	.7441	1.5826	3.0447
	.7831	1.4628	2.9149
	.7753	1.4244	2.9185
Average	.7612	1.4899	2.9991
Standard Deviation	.0211	.0674	.0998
CV	.0277	.0452	.0333

$$CV = \frac{3(.0277)^2 + 3(.0452)^2 + 3(.0333)^2}{3+3+3}$$

CV+0.036

4.6 Storage Data.

Samples were generated at 1.5 mg/m³ ethylene oxide at 85% relative humidity, 22°C and 633 mm. All samples were taken for 20 minutes at 0.05 Lpm. Six samples were analyzed as soon as possible and fifteen samples were stored at refrigerated temperature (5°C) and fifteen samples were stored at ambient temperature (23°C). These stored samples were analyzed over a period of nineteen days.

PERCENT RECOVERY

Day analyzed	Refrigerated	Ambient
1	87.0	87.0
1	93.0	93.0
1	94.0	94.0
1	92.0	92.0
4	92.0	91.0
4	93.0	88.0
4	91.0	89.0
6	92.0	
6	92.0	
8		92.0
8		86.0
10	91.7	
10	95.5	
10	95.7	
11		90.0

PERCENT RECOVERY—Continued

Day analyzed	Refrigerated	Ambient
11		82.0
13	78.0	
13	81.4	
13	82.4	
14		78.5
14		72.1
18	66.0	
18	68.0	
19		64.0
19		77.0

4.7 Breakthrough Data.

Breakthrough studies were done at 2 ppm (3.6 mg/m³) at approximately 85% relative humidity at 22°C (ambient temperature). Two

charcoal tubes were used in series. The backup tube was changed every 10 minutes and analyzed for breakthrough. The flow rate was 0.050 Lpm.

Tube No.	Time (minutes)	Percent breakthrough
1	10	(1)
2	20	(1)
3	30	(1)
4	40	1.23
5	50	3.46
6	60	18.71
7	70	39.2
8	80	53.3
9	90	72.0
10	100	96.0
11	110	113.0
12	120	133.9

[1] None.

The 5% breakthrough volume was reached when 2.6 liters of test atmosphere were drawn through the charcoal tubes.

5. References.

5.1 "NIOSH Manual of Analytical Methods," 2nd ed. NIOSH: Cincinnati, 1977; Method S286.

5.2 "IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man," International Agency for Research on Cancer: Lyon, 1976; Vol. II, p. 157.

5.3 Sax., N.I. "Dangerous Properties of Industrial Materials," 4th ed.; Van Nostrand Reinhold Company. New York, 1975; p. 741.

5.4 "The Condensed Chemical Dictionary", 9th ed.; Hawley, G.G., ed.; Van Nostrand Reinhold Company, New York, 1977; p. 361.

Summary of Other Sampling Procedures

OSHA believes that served other types of monitoring equipment and techniques exist for monitoring time-weighted averages. Considerable research and method development is currently being performed, which will lead to improvements and a wider variety of monitoring techniques. A combination of monitoring procedures can be used. There probably is no one best method for monitoring personal exposure to ethylene oxide in all cases. There are advantages, disadvantages, and limitations to each method. The method of choice will depend on the need and requirements. Some commonly used methods include the use of charcoal tubes, passive dosimeters, Tedler gas sampling bags, detector tubes, photoionization detection units, infrared detection units and gas chromatographs. A number of these methods are described below.

A. Charcoal Tube Sampling Procedures

Qazi-Ketcham method (Ex. 11–133)—This method consists of collecting EtO on Columbia JXC activated carbon, desorbing the EtO with carbon disulfide and analyzing by gas chromatography with flame ionization detection. Union Carbide has recently updated and revalidated this monitoring procedures. This method is capable of determining both eight-hour time-weighted average exposures and short-term exposures. The method was validated to 0.5 ppm. Like other charcoal collecting procedures, the method requires considerable analytical expertise.

ASTM-proposed method—The Ethylene Oxide Industry Council (EOIC) has contracted with Clayton Environmental Consultants, Inc. to conduct a collaborative study for the proposed method. The ASTM-Proposed method is similar to the method published by Qazi and Ketcham is the November 1977 American Industrial Hygiene Association Journal, and to the method of Pilney and Coyne, presented at the 1979 American Industrial Hygiene Conference. After the air to be sampled is drawn through an activated charcoal tube, the ethylene oxide is desorbed from the tube using carbon disulfide and is quantitated by gas chromatography utilizing a flame ionization detector. The ASTM-proposed method specifies a large two-section charcoal tube, shipment in dry ice, storage at less than −5°C, and analysis within three weeks to prevent migration and sample loss. Two types of charcoal tubes are being tested—Pittsburgh Coconut-Based (PCB) and Columbia JXC charcoal. This collaborative study will give an indication of the inter- and intralaboratory precision and accuracy of the ASTM-proposed method. Several laboratories have considerable expertise using the Qazi-Ketcham and Dow methods.

B. Passive Monitors—Ethylene oxide diffuses into the monitor and is collected in the sampling media. The DuPont Pro-Tek badge collects EtO in an absorbing solution, which is analyzed colorimetrically to determine the amount of EtO present. The 3M 350 badge collects the EtO on chemically treated charcoal. Other passive monitors are currently being developed and tested. Both 3M and DuPont have submitted data indicating their dosimeters meet the precision and accuracy requirements of the proposed ethylene oxide standard. Both presented laboratory validation data to 0.2 ppm (Exs. 11–65, 4–20, 108, 109, 130).

C. Tedlar Gas Sampling Bags-Samples are collected by drawing a known volume of air into a Tedlar gas sampling bag. The ethylene oxide concentration is often determined on-site using a portable gas chromatograph or portable infrared spectometer.

D. Detector tubes—A known volume of air is drawn through a detector tube using a small hand pump. The concentration of EtO is related to the length of stain developed in the tube. Detector tubes are economical, easy to use, and give an immediate readout. Unfortunately, partly because they are nonspecific, their accuracy is often questionable. Since the sample is taken over a short period of time, they may be useful for determining the source of leaks.

E. Direct Reading Instruments—There are numerous types of direct reading instruments, each having its own strengths and weaknesses (Exs. 135B, 135C, 107, 11–78, 11–153). Many are relatively new, offering greater sensitivity and specificity. Popular ethylene oxide direct reading instruments include infrared detection units, photoionization detection units, and gas chromatographs.

Portable infrared analyzers provide an immediate, continuous indication of a concentration value; making them particularly useful for locating high concentration pockets, in leak detection and in ambient air monitoring. In infrared detection units, the amount of infrared light absorbed by the gas being analyzed at selected infrared wavelengths is related to the concentration of a particular component. Various models have either fixed or variable infrared filters, differing cell pathlengths, and microcomputer controls for greater sensitivity, automation, and interference elimination.

A fairly recent detection system is photoionization detection. The molecules are ionized by high energy ultraviolet light. The resulting current is measured. Since different substances have different ionization potentials, other organic compounds may be ionized. The lower the lamp energy, the better the selectivity. As a continuous monitor, photoionization detection can be useful for locating high concentration pockets, in leak detection, and continuous ambient air monitoring. Both portable and stationary gas chromatographs are available with various types of detectors, including photoionization detectors. A gas chromatograph with a photoionization detector retains the photionization sensitivity, but minimizes or eliminates interferences. For several GC/PID units, the sensitivity is in the 0.1–0.2 ppm EtO range. The GC/PID with microprocessors can sample up to 20 sample points sequentially, calculate and record data, and activate alarms or ventilation systems. Many are quite flexible and can be configured to meet the specific analysis needs for the workplace.

DuPont presented their laboratory validation data of the accuracy of the Qazi-Ketcham charcoal tube, the PCB charcoal tube, Miran 103 IR analyzer, 3M #3550 monitor and the Du Pont C–70 badge. Quoting Elbert V. Kring:

> We also beleive that OSHA's proposed accuracy in this standard is appropriate. At plus or minus 25 percent at one part per million, and plus or minus 35 percent below that. And, our data indicates there's only one monitoring method, right now, that we've tested thoroughly, that meets that accuracy requirements. That is the Du Pont Pro-Tek badge* * *. We also believe that this kind of data should be confirmed by another independent laboratory, using the same type dynamic chamber testing (Tr. 1470)

Additional data by an independent laboratory following their exact protocol was not submitted. However, information was submitted on comparisons and precision and accuracy of those monitoring procedures which indicate far better precision and accuracy of those monitoring procedures than that obtained by Du Pont (Ex. 4–20, 130, 11–68, 11–133, 130, 135A).

The accuracy of any method depends to a large degree upon the skills and experience of those who not only collect the samples but also those who analyze the samples. Even for methods that are collaboratively tested, some laboratories are closer to the true values than others. Some laboratories may meet the precision and accuracy requirements of the method; others may consistently far exceed them for the same method.

§ 1915.1048 Formaldehyde.

(a) *Scope and application.* This standard applies to all occupational exposures to formaldehyde, i.e. from formaldehyde gas, its solutions, and materials that release formaldehyde.

(b) *Definitions.* For purposes of this standard, the following definitions shall apply:

Action level means a concentration of 0.5 part formaldehyde per million parts of air (0.5 ppm) calculated as an eight (8)-hour time-weighted average (TWA) concentration.

Assistant Secretary means the Assistant Secretary of Labor for the Occupational Safety and Health Administration, U.S. Department of Labor, or designee.

Authorized person means any person required by work duties to be present in regulated areas, or authorized to do so by the employer, by this section, or by the OSH Act of 1970.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency is any occurrence, such as but not limited to equipment failure, rupture of containers, or failure of control equipment that results in an uncontrolled release of a significant amount of formaldehyde.

Employee exposure means the exposure to airborne formaldehyde which would occur without corrections for protection provided by any respirator that is in use.

Formaldehyde means the chemical substance, HCHO, Chemical Abstracts Service Registry No. 50–00–0.

(c) *Permissible Exposure Limit (PEL)*—(1) *TWA*: The employer shall assure that no employee is exposed to an airborne concentration of formaldehyde which exceeds 0.75 parts formaldehyde per million parts of air (0.75 ppm) as an 8-hour TWA.

(2) *Short Term Exposure Limit (STEL)*: The employer shall assure that no employee is exposed to an airborne concentration of formaldehyde which exceeds two parts formaldehyde per million parts of air (2 ppm) as a 15-minute STEL.

(d) *Exposure monitoring*—(1) *General.* (i) Each employer who has a workplace covered by this standard shall monitor employees to determine their exposure to formaldehyde.

(ii) *Exception.* Where the employer documents, using objective data, that the presence of formaldehyde or formaldehyde-releasing products in the workplace cannot result in airborne concentrations of formaldehyde that would cause any employee to be exposed at or above the action level or the STEL under foreseeable conditions of use, the employer will not be required to measure employee exposure to formaldehyde.

(iii) When an employee's exposure is determined from representative sampling, the measurements used shall be representative of the employee's full shift or short-term exposure to formaldehyde, as appropriate.

(iv) Representative samples for each job classification in each work area shall be taken for each shift unless the employer can document with objective data that exposure levels for a given job classification are equivalent for different work shifts.

(2) *Initial monitoring.* The employer shall identify all employees who may be exposed at or above the action level or at or above the STEL and accurately determine the exposure of each employee so identified.

(i) Unless the employer chooses to measure the exposure of each employee potentially exposed to formaldehyde, the employer shall develop a representative sampling strategy and measure sufficient exposures within each job classification for each workshift to correctly characterize and not underestimate the exposure of any employee within each exposure group.

(ii) The initial monitoring process shall be repeated each time there is a change in production, equipment, process, personnel, or control measures which may result in new or additional exposure to formaldehyde.

(iii) If the employer receives reports of signs or symptoms of respiratory or dermal conditions associated with formaldehyde exposure, the employer shall promptly monitor the affected employee's exposure.

(3) *Periodic monitoring.* (i) The employer shall periodically measure and accurately determine exposure to formaldehyde for employees shown by the initial monitoring to be exposed at or above the action level or at or above the STEL.

(ii) If the last monitoring results reveal employee exposure at or above the action level, the employer shall repeat monitoring of the employees at least every 6 months.

(iii) If the last monitoring results reveal employee exposure at or above the STEL, the employer shall repeat monitoring of the employees at least once a year under worst conditions.

(4) *Termination of monitoring.* The employer may discontinue periodic monitoring for employees if results from two consecutive sampling periods taken at least 7 days apart show that employee exposure is below the action level and the STEL. The results must be statistically representative and consistent with the employer's knowledge of the job and work operation.

(5) *Accuracy of monitoring.* Monitoring shall be accurate, at the 95 percent confidence level, to within plus or minus 25 percent for airborne concentrations of formaldehyde at the TWA and the STEL and to within plus or minus 35 percent for airborne concentrations of formaldehyde at the action level.

(6) *Employee notification of monitoring results.* Within 15 days of receiving the results of exposure monitoring conducted under this standard, the employer shall notify the affected employees of these results. Notification shall be in writing, either by distributing copies of the results to the employees or by posting the results. If the employee exposure is over either PEL, the employer shall develop and implement a written plan to reduce employee exposure to or below both PELs, and give written notice to employees. The written notice shall contain a description of the corrective action being taken by the employer to decrease exposure.

(7) *Observation of monitoring.* (i) The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to formaldehyde required by this standard.

(ii) When observation of the monitoring of employee exposure to formaldehyde requires entry into an area where the use of protective clothing or equipment is required, the employer shall provide the clothing and equipment to the observer, require the observer to use such clothing and equipment, and assure that the observer complies with all other applicable safety and health procedures.

(e) *Regulated areas.* (1) The employer shall establish regulated areas where the concentration of airborne formaldehyde exceeds either the TWA or the STEL and post all entrances and accessways with signs bearing the following information:

DANGER
FORMALDEHYDE
IRRITANT AND POTENTIAL CANCER HAZARD
AUTHORIZED PERSONNEL ONLY

(2) The employer shall limit access to regulated areas to authorized persons who have been trained to recognize the hazards of formaldehyde.

(3) An employer at a multiemployer worksite who establishes a regulated area shall communicate the access

restrictions and locations of these areas to other employers with work operations at that worksite.

(f) *Methods of compliance*—(1) *Engineering controls and work practices.* The employer shall institute engineering and work practice controls to reduce and maintain employee exposures to formaldehyde at or below the TWA and the STEL.

(2) *Exception.* Whenever the employer has established that feasible engineering and work practice controls cannot reduce employee exposure to or below either of the PELs, the employer shall apply these controls to reduce employee exposures to the extent feasible and shall supplement them with respirators which satisfy this standard.

(g) *Respiratory protection*—(1) *General.* Where respiratory protection is required, the employer shall provide the respirators at no cost to the employee and shall assure that they are properly used. The respirators shall comply with the requirements of this standard and shall reduce the concentration of formaldehyde inhaled by the employee to at or below both the TWA and the STEL. Respirators shall be used in the following circumstances:

(i) During the interval necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations, such as maintenance and repair activities or vessel cleaning, for which the employer establishes that engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PELs; and

(iv) In emergencies.

(2) *Respirator selection.* (i) The appropriate respirators as specified in Table 1 shall be selected from those approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR part 11.

TABLE 1.—MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION AGAINST FORMALDEHYDE

Condition of use or formaldehyde concentration (ppm)	Minimum respirator required[1]
Up to 7.5 ppm. (10 x PEL)	Full facepiece with cartridges or canisters specifically approved for protection against formaldehyde.[2]
Up to 75 ppm. (100 x PEL)	Full-face mask with chin style or chest or back mounted type with industrial size canister specifically approved for protection against formaldehyde. Type C supplied-air respirator, pressure demand or continuous flow type, with full facepiece, hood, or helmet.
Above 75 ppm or unknown (emergencies). (100 x PEL).	Self-contained breathing apparatus (SCBA) with positive pressure full facepiece. Combination supplied-air, full facepiece positive pressure respirator with auxiliary self-contained air supply.
Firefighting	SCBA with positive pressure in full facepiece.
Escape	SCBA in demand or pressure demand mode. Full-face mask with chin style or front or back mounted type industrial size canister specifically approved for protection against formaldehyde.

[1] Respirators specified for use at higher concentrations may be used at lower concentrations.

[2] A half-mask respirator with cartridges specifically approved for protection against formaldehyde can be substituted for the full facepiece respirator providing that effective gas-proof goggles are provided and used in combination with the half-mask respirator.

(ii) The employer shall make available a powered air-purifying respirator adequate to protect against formaldehyde exposure to any employee who experiences difficulty wearing a negative pressure respirator to reduce exposure to formaldehyde.

(3) *Respirator usage.* (i) whenever respirator use is required by this standard, the employer shall institute a respiratory protection program in accordance with 20 CFR 1910.134 (b), (d), (e), and (f).

(ii) The employer shall perform either quantitative or qualitative face fit tests in accordance with the procedures outlined in Appendix E at the time of initial fitting and at least annually thereafter for all employees required by this standard to wear negative pressure respirators.

(A) Respirators selected shall be from those exhibiting the best facepiece fit.

(B) No respirator shall be chosen that would potentially permit the employee to inhale formaldehyde at concentrations in excess of either the TWA or the STEL.

(iii) Where air purifying chemical cartridge respirators are used, the cartridges shall be replaced after three hours of use or at the end of the workshift, whichever is sooner unless the cartridge contains a NIOSH-approved end-of-service indicator to show when breakthrough occurs.

(iv) Unless the canister contains a NIOSH-approved end-of-service-life indicator to show when breakthrough occurs, canisters used in atmospheres up to 7.5 ppm (10×PEL) shall be replaced every 4 hours and industrial sized canisters used in atmospheres up to 75 ppm (100×PEL) shall be replaced every two hours or at the end of the workshift, whichever is sooner.

(v) Employers shall permit employees to leave the work area to wash their faces and respirator facepieces as needed to prevent skin irritation from respirator use.

(h) *Protective equipment and clothing.* Employers shall comply with the provisions of 29 CFR 1910.132 and 1910.133. When protective equipment or clothing is provided under these provisions, the employer shall provide these protective devices at no cost to the employee and assure that the employee wears them.

(1) *Selection.* The employer shall select protective clothing and equipment based upon the form of formaldehyde to be encountered, the conditions of use, and the hazard to be prevented.

(i) All contact of the eyes and skin with liquids containing 1 percent or more formaldehyde shall be prevented by the use of chemical protective clothing made of material impervious to formaldehyde and the use of other personal protective equipment, such as goggles and face shields, as appropriate to the operation.

(ii) Contact with irritating or sensitizing materials shall be prevented to the extent necessary to eliminate the hazard.

(iii) Where a face shield is worn, chemical safety goggles are also required if there is a danger of formaldehyde reaching the area of the eye.

(iv) Full body protection shall be worn for entry into areas where concentrations exceed 100 ppm and for emergency reentry into areas of unknown concentration.

(2) *Maintenance of protective equipment and clothing.* (i) The employer shall assure that protective equipment and clothing that has become

contaminated with formaldehyde is cleaned or laundered before its reuse.

(ii) When ventilating formaldehyde-contaminated clothing and equipment, the employer shall establish a storage area so that employee exposure is minimized. Containers for contaminated clothing and equipment and storage areas shall have labels and signs containing the following information:

DANGER
FORMALDEHYDE-CONTAMINATED [CLOTHING] EQUIPMENT
AVOID INHALATION AND SKIN CONTACT

(iii) The employer shall assure that only persons trained to recognize the hazards of formaldehyde remove the contaminated material from the storage area for purposes of cleaning, laundering, or disposal.

(iv) The employer shall assure that no employee takes home equipment or clothing that is contaminated with formaldehyde.

(v) The employer shall repair or replace all required protective clothing and equipment for each affected employee as necessary to assure its effectiveness.

(vi) The employer shall inform any person who launders, cleans, or repairs such clothing or equipment of formaldehyde's potentially harmful effects and of procedures to safely handle the clothing and equipment.

(i) *Hygiene protection.* (1) The employer shall provide change rooms, as described in 29 CFR 1910.141 for employees who are required to change from work clothing into protective clothing to prevent skin contact with formaldehyde.

(2) If employees' skin may become spashed with solutions containing 1 percent or greater formaldehyde, for example, because of equipment failure or improper work practices, the employer shall provide conveniently located quick drench showers and assure that affected employees use these facilities immediately.

(3) If there is any possibility that an employee's eyes may be splashed with solutions containing 0.1 percent or greater formaldehyde, the employer shall provide acceptable eyewash facilities within the immediate work area for emergency use.

(j) *Housekeeping.* For operations involving formaldehyde liquids or gas, the employer shall conduct a program to detect leaks and spills, including regular visual inspections.

(1) Preventative maintenance of equipment, including surveys for leaks, shall be undertaken at regular intervals.

(2) In work areas where spillage may occur, the employer shall make provisions to contain the spill, to decontaminate the work area, and to dispose of the waste.

(3) The employer shall assure that all leaks are repaired and spills are cleaned promptly by employees wearing suitable protective equipment and trained in proper methods for cleanup and decontamination.

(4) Formaldehyde-contaminated waste and debris resulting from leaks or spills shall be placed for disposal in sealed containers bearing a label warning of formaldehyde's presence and of the hazards associated with formaldehyde.

(k) *Emergencies.* For each workplace where there is the possibility of an emergency involving formaldehyde, the employer shall assure appropriate procedures are adopted to minimize injury and loss of life. Appropriate procedures shall be implemented in the event of an emergency.

(l) *Medical surveillance*—(1) *Employees covered.* (i) The employer shall institute medical surveillance programs for all employees exposed to formaldehyde at concentrations at or exceeding the action level or exceeding the STEL.

(ii) The employer shall make medical surveillance available for employees who develop signs and symptoms of overexposure to formaldehyde and for all employees exposed to formaldehyde in emergencies. When determining whether an employee may be experiencing signs and symptoms of possible overexposure to formaldehyde, the employer may rely on the evidence that signs and symptoms associated with formaldehyde exposure will occur only in exceptional circumstances when airborne exposure is less than 0.1 ppm and when formaldehyde is present in material in concentrations less than 0.1 percent.

(2) *Examination by a physician.* All medical procedures, including administration of medical disease questionnaires, shall be performed by or under the supervision of a licensed physician and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

(3) *Medical disease questionnaire.* The employer shall make the following medical surveillance available to employees prior to assignment to a job where formaldehyde exposure is at or above the action level or above the STEL and annually thereafter. The employer shall also make the following medical surveillance available promptly upon determining that an employee is experiencing signs and symptoms indicative of possible overexposure to formaldehyde.

(i) Administration of a medical disease questionnaire, such as in appendix D, which is designed to elicit information on work history, smoking history, any evidence of eye, nose, or throat irritation; chronic airway problems or hyperreactive airway disease: allergic skin conditions or dermatitis; and upper or lower respiratory problems.

(ii) A determination by the physician, based on evaluation of the medical disease questionnaire, of whether a medical examination is necessary for employees not required to wear respirators to reduce exposure to formaldehyde.

(4) *Medical examinations.* Medical examinations shall be given to any employee who the physician feels, based on information in the medical disease questionnaire, may be at increased risk from exposure to formaldehyde and at the time of initial assignment and at least annually thereafter to all employees required to wear a respirator to reduce exposure to formaldehyde. The medical examination shall include:

(i) A physical examination with emphasis on evidence of irritation or sensitization of the skin and respiratory system, shortness of breath, or irritation of the eyes.

(ii) Laboratory examinations for respirator wearers consisting of baseline and annual pulmonary function tests. As a minimum, these tests shall consist of forced vital capacity (FVC), forced expiratory volume in one second (FEV_1), and forced expiratory flow (FEF).

(iii) Any other test which the examining physician deems necessary to complete the written opinion.

(iv) Counseling of employees having medical conditions that would be directly or indirectly aggravated by exposure to formaldehyde on the increased risk of impairment of their health.

(5) *Examinations for employees exposed in an emergency.* The employer shall make medical examinations available as soon as possible to all employees who have been exposed to formaldehyde in an emergency.

(i) The examination shall include a medical and work history with emphasis on any evidence of upper or lower respiratory problems, allergic conditions, skin reaction or hypersensitivity, and any evidence of eye, nose, or throat irritation.

(ii) Other examinations shall consist of those elements considered appropriate by the examining physician.

(6) *Information provided to the physician.* The employer shall provide

the following information to the examining physician:

(i) A copy of this standard and appendix A, C, D, and E;

(ii) A description of the affected employee's job duties as they relate to the employee's exposure to formaldehyde;

(iii) The representative exposure level for the employee's job assignment;

(iv) Information concerning any personal protective equipment and respiratory protection used or to be used by the employee; and

(v) Information from previous medical examinations of the affected employee within the control of the employer.

(vi) In the event of a nonroutine examination because of an emergency, the employer shall provide to the physician as soon as possible: A description of how the emergency occurred and the exposure the victim may have received.

(7) *Physician's written opinion.* (i) For each examination required under this standard, the employer shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination except that it shall not reveal specific findings or diagnoses unrelated to occupational exposure to formaldehyde. The written opinion shall include:

(A) The physician's opinion as to whether the employee has any medical condition that would place the employee at an increased risk of material impairment of health from exposure to formaldehyde;

(B) Any recommended limitations on the employee's exposure or changes in the use of personal protective equipment, including respirators;

(C) A statement that the employee has been informed by the physician of any medical conditions which would be aggravated by exposure to formaldehyde, whether these conditions may have resulted from past formaldehyde exposure or from exposure in an emergency, and whether there is a need for further examination or treatment.

(ii) The employer shall provide for retention of the results of the medical examination and tests conducted by the physician.

(iii) The employer shall provide a copy of the physician's written opinion to the affected employee within 15 days of its receipt.

(8) *Medical removal.* (i) The provisions of paragraph (l)(8) apply when an employee reports significant irritation of the mucosa of the eyes or the upper airways, respiratory sensitization, dermal irritation, or dermal sensitization attributed to workplace formaldehyde exposure. Medical removal provisions do not apply in the case of dermal irritation or dermal sensitization when the product suspected of causing the dermal condition contains less than 0.05% formaldehyde.

(ii) An employee's report of signs or symptoms of possible overexposure to formaldehyde shall be evaluated by a physician selected by the employer pursuant to paragraph (l)(3). If the physician determines that a medical examination is not necessary under paragraph (l)(3)(ii), there shall be a two-week evaluation and remediation period to permit the employer to ascertain whether the signs or symptoms subside untreated or with the use of creams, gloves, first aid treatment or personal protective equipment. Industrial hygiene measures that limit the employee's exposure to formaldehyde may also be implemented during this period. The employee shall be referred immediately to a physician prior to expiration of the two-week period if the signs or symptoms worsen. Earnings, seniority and benefits may not be altered during the two-week period by virtue of the report.

(iii) If the signs or symptoms have not subsided or been remedied by the end of the two-week period, or earlier if signs or symptoms warrant, the employee shall be examined by a physician selected by the employer. The physician shall presume, absent contrary evidence, that observed dermal irritation or dermal sensitization are not attributable to formaldehyde when products to which the affected employee is exposed contain less than 0.1% formaldehyde.

(iv) Medical examinations shall be conducted in compliance with the requirements of paragraph (l)(5) (i) and (ii). Additional guidelines for conducting medical exams are contained in Appendix C.

(v) If the physician finds that significant irritation of the mucosa of the eyes or of the upper airways, respiratory sensitization, dermal irritation, or dermal sensitization result from workplace formaldehyde exposure and recommends restrictions or removal, the employer shall promptly comply with the restrictions or recommendation of removal. In the event of a recommendation of removal, the employer shall remove the effected employee from the current formaldehyde exposure and if possible, transfer the employee to work having no or significantly less exposure to formaldehyde.

(vi) When an employee is removed pursuant to paragraph (l)(8)(v), the employer shall transfer the employee to comparable work for which the employee is qualified or can be trained in a short period (up to 6 months), where the formaldehyde exposures are as low as possible, but not higher than the action level. The employeer shall maintain the employee's current earnings, seniority, and other benefits. If there is no such work available, the employer shall maintain the employee's current earnings, seniority and other benefits until such work becomes available, until the employee is determined to be unable to return to workplace formaldehyde exposure, until the employee is determined to be able to return to the original job status, or for six months, whichever comes first.

(vii) The employer shall arrange for a follow-up medical examination to take place within six months after the employee is removed pursuant to this paragraph. This examination shall determine if the employee can return to the original job status, or if the removal is to be permanent. The physician shall make a decision within six months of the date the employee was removed as to whether the employee can be returned to the original job status, or if the removal is to be permanent.

(viii) An employer's obligation to provide earnings, seniority and other benefits to a removed employee may be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program or from employment with another employer made possible by virtue of the employee's removal.

(ix) In making determinations of the formaldehyde content of materials under this paragraph the employer may rely on objective data.

(9) *Multiple physician review.* (i) After the employer selects the initial physician who conducts any medical examination or consultation to determine whether medical removal or restriction is appropriate, the employee may designate a second physician to review any findings, determinations or recommendations of the initial physician and to conduct such examinations, consultations, and laboratory tests as the second physician deems necessary and appropriate to evaluate the effects of formaldehyde exposure and to facilitate this review.

(ii) The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or

consultation for the purpose of medical removal or restriction.

(iii) The employer may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within fifteen (15) days after receipt of the notification of the right to seek a second medical opinion, or receipt of the initial physician's written opinion, whichever is later;

(A) The employee informs the employer of the intention to seek a second medical opinion, and

(B) The employee initiates steps to make an appointment with a second physician.

(iv) If the findings, determinations or recommendations of the second physician differ from those of the initial physician, then the employer and the employee shall assure that efforts are made for the two physicians to resolve the disagreement. If the two physicians are unable to quickly resolve their disagreement, then the employer and the employee through their respective physicians shall designate a third physician who shall be a specialist in the field at issue:

(A) To review the findings, determinations or recommendations of the prior physicians; and

(B) To conduct such examinations, consultations, laboratory tests and discussions with the prior physicians as the third physician deems necessary to resolve the disagreement of the prior physicians.

(v) In the alternative, the employer and the employee or authorized employee representative may jointly designate such third physician.

(vi) The employer shall act consistent with the findings, determinations and recommendations of the third physician, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.

(m) *Hazard communication*—(1) *General.* Communication of the hazards associated with formaldehyde in the workplace shall be governed by the requirements of paragraph (m). The definitions of 29 CFR 1915.1200(c) shall apply under this paragraph.

(i) The following shall be subject to the hazard communication requirements of this paragraph: Formaldehyde gas, all mixtures or solutions composed of greater than 0.1 percent formaldehyde, and materials capable of releasing formaldehyde into the air, under reasonably foreseeable conditions of use, at concentrations reaching or exceeding 0.1 ppm.

(ii) As a minimum, specific health hazards that the employer shall address are: Cancer, irritation and sensitization of the skin and respiratory system, eye and throat irritation, and acute toxicity.

(2) Manufacturers and importers who produce or import formaldehyde or formaldehyde-containing products shall provide downstream employers using or handling these products with an objective determination through the required labels and MSDSs if these items may constitute a health hazard within the meaning of 29 CFR 1915.1200(d) under normal conditions of use.

(3) *Labels.* (i) The employer shall assure that hazard warning labels complying with the requirements of 29 CFR 1915.1200(f) are affixed to all containers of materials listed in paragraph (m)(1)(i), except to the extent that 29 CFR 1915.1200(f) is inconsistent with this paragraph.

(ii) *Information on labels.* As a minimum, for all materials listed in paragraph (m)(1)(i) capable of releasing formaldehyde at levels of 0.1 ppm to 0.5 ppm, labels shall identify that the product contains formaldehyde; list the name and address of the responsible party; and state that physical and health hazard information is readily available from the employer and from material safety data sheets.

(iii) For materials listed in paragraph (m)(1)(i) capable of releasing formaldehyde at levels above 0.5 ppm, labels shall appropriately address all hazards as defined in 29 CFR 1915.1200(d) and 29 CFR 1915.1200 appendices A and B, including respiratory sensitization, and shall contain the words "Potential Cancer Hazard."

(iv) In making the determinations of anticipated levels of formaldehyde release, the employer may rely on objective data indicating the extent of potential formaldehyde release under reasonably foreseeable conditions of use.

(v) *Substitute warning labels.* The employer may use warning labels required by other statutes, regulations, or ordinances which impart the same information as the warning statements required by this paragraph.

(4) *Material safety data sheets.* (i) Any employer who uses formaldehyde-containing materials listed in paragraph (m)(1)(i) shall comply with the requirements of 29 CFR 1915.1200(g) with regard to the development and updating of material safety data sheets.

(ii) Manufacturers, importers, and distributors of formaldehyde-containing materials listed in paragraph (m)(1)(i) shall assure that material safety data sheets and updated information are provided to all employers purchasing such materials at the time of the initial shipment and at the time of the first shipment after a material safety data sheet is updated.

(5) *Written hazard communication program.* The employer shall develop, implement, and maintain at the workplace, a written hazard communication program for formaldehyde exposures in the workplace, which at a minimum describes how the requirements specified in this paragraph for labels and other forms of warning and material safety data sheets, and paragraph (n) for employee information and training, will be met. Employers in multi-employer workplaces shall comply with the requirements of 29 CFR 1915.1200(e)(2).

(n) *Employee information and training*—(1) *Participation.* The employer shall assure that all employees who are assigned to workplaces where there is exposure to formaldehyde participate in a training program, except that where the employer can show, using objective data, that employees are not exposed to formaldehyde at or above 0.1 ppm, the employer is not required to provide training.

(2) *Frequency.* Employers shall provide such information and training to employees at the time of initial assignment, and whenever a new exposure to formaldehyde is introduced into the work area. The training shall be repeated at least annually.

(3) *Training program.* The training program shall be conducted in a manner which the employee is able to understand and shall include:

(i) A discussion of the contents of this regulation and the contents of the Material Safety Data Sheet.

(ii) The purpose for and a description of the medical surveillance program required by this standard, including:

(A) A description of the potential health hazards associated with exposure to formaldehyde and a description of the signs and symptoms of exposure to formaldehyde.

(B) Instructions to immediately report to the employer the development of any adverse signs or symptoms that the employee suspects is attributable to formaldehyde exposure.

(iii) Description of operations in the work area where formaldehyde is present and an explanation of the safe work practices appropriate for limiting exposure to formaldehyde in each job;

(iv) The purpose for, proper use of, and limitations of personal protective clothing and equipment;

(v) Instructions for the handling of spills, emergencies, and clean-up procedures;

(vi) An explanation of the importance of engineering and work practice controls for employee protection and any necessary instruction in the use of these controls; and

(vii) A review of emergency procedures including the specific duties or assignments of each employee in the event of an emergency.

(4) *Access to training materials.* (i) The employer shall inform all affected employees of the location of written training materials and shall make these materials readily available, without cost, to the affected employees.

(ii) The employer shall provide, upon request, all training materials relating to the employee training program to the Assistant Secretary and the Director.

(o) *Recordkeeping*—(1) *Exposure measurements.* The employer shall establish and maintain an accurate record of all measurements taken to monitor employee exposure to formaldehyde. This record shall include:

(i) The date of measurement;

(ii) The operation being monitored;

(iii) The methods of sampling and analysis and evidence of their accuracy and precision;

(iv) The number, durations, time, and results of samples taken;

(v) The types of protective devices worn; and

(vi) The names, job classifications, social security numbers, and exposure estimates of the employees whose exposures are represented by the actual monitoring results.

(2) *Exposure determinations.* Where the employer has determined that no monitoring is required under this standard, the employer shall maintain a record of the objective data relied upon to support the determination that no employee is exposed to formaldehyde at or above the action level.

(3) *Medical surveillance.* The employer shall establish and maintain an accurate record for each employee subject to medical surveillance under this standard. This record shall include:

(i) The name and social security number of the employee;

(ii) The physician's written opinion;

(iii) A list of any employee health complaints that may be related to exposure to formaldehyde; and

(iv) A copy of the medical examination results, including medical disease questionnaires and results of any medical tests required by the standard or mandated by the examining physician.

(4) *Respirator fit testing.* (i) The employer shall establish and maintain accurate records for employees subject to negative pressure respirator fit testing required by this standard.

(ii) This record shall include:

(A) A copy of the protocol selected for respirator fit testing.

(B) A copy of the results of any fit testing performed.

(C) The size and manufacturer of the types of respirators available for selection.

(D) The date of the most recent fit testing, the name and social security number of each tested employee, and the respirator type and facepiece selected.

(5) *Record retention.* The employer shall retain records required by this standard for at least the following periods:

(i) Exposure records and determinations shall be kept for at least 30 years.

(ii) Medical records shall be kept for the duration of employment plus 30 years.

(iii) Respirator fit testing records shall be kept until replaced by a more recent record.

(6) *Availability of records.* (i) Upon request, the employer shall make all records maintained as a requirement of this standard available for examination and copying to the Assistant Secretary and the Director.

(ii) The employer shall make employee exposure records, including estimates made from representative monitoring and available upon request for examination, and copying to the subject employee, or former employee, and employee representatives in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i).

(iii) Employee medical records required by this standard shall be provided upon request for examination and coying, to the subject employee or former employee or to anyone having the specific written consent of the subject employee or former employee in accordance with 29 CFR 1915.1120 (a)–(e) and (g)–(i).

(p) *Dates*—(1) *Effective dates*—(i) *General.* This section shall become effective February 2, 1988, except as noted below.

(ii) *Laboratories.* This standard shall become effective for anatomy, histology, and pathology laboratories February 2, 1988, except as noted in the start-up date section. For all other laboratories, paragraphs (a) and (c) of this standard shall become effective February 2, 1988, and paragraphs (b) and (d)–(o) of this standard shall become effective on September 1, 1988 except as noted in the start-up date section.

(2) *Start-up dates*—(i) *Exposure determinations.* Initial monitoring or objective determinations that no monitoring is required by the standard shall be completed by 6 months after the effective date of the standard.

(ii) *Medical surveillance.* The initial medical surveillance of all eligible employees shall be completed by 6 months after the effective date of the standard.

(iii) *Emergencies.* The emergency procedures required by this standard shall be implemented by 6 months after the effective date of the standard.

(iv) *Respiratory protection.* Respiratory protection as required in this standard shall be provided as soon as possible and no later than 9 months after the effective date of the standard.

(v) *Engineering and work practice controls.* Engineering and work practice controls required by this standard shall be implemented as soon as possible, but no later than one year after the effective date of the standard.

(vi) *Employee training.* Written materials for employee training shall be updated as soon as possible, but no later than 2 months after the effective date of the standard.

(3) *Start-up dates of amended paragraphs*—(i) *Respiratory protection.* Respiratory protection required to meet the amended PEL of 0.75 ppm TWA shall be provided as soon as possible but no later than September 24, 1992.

(ii) *Engineering and work practice controls.* Engineering and work practice controls required to meet the amended PEL of 0.75 ppm TWA shall be implemented as soon as possible, but no later than June 26, 1993.

(iii) *Medical removal protection.* The medical removal protection provisions including the multiple physician review mechanism shall be implemented no later than December 28, 1992.

(iv) *Hazard communication.* The labeling provisions contained in amended paragraph (m) of this standard shall be implemented no later than December 28, 1992. Labeling of containers of formaldehyde products shall continue to comply with the provisions of 29 CFR 1915.1200 (e)–(j) until that time.

(v) *Training.* The periodic training mandated for all employees exposed to formaldehyde between 0.1 ppm and 0.5 ppm shall begin no later than August 25, 1992.

(Approved by the Office of Management and Budget under control number 1218–0145)

Appendix A to § 1915.1048—Substance Technical Guidelines for Formalin

The following Substance Technical Guideline for Formalin provides information

on uninhibited formalin solution (37% formaldehyde, no methanol stabilizer). It is designed to inform employees at the production level of their rights and duties under the formaldehyde standard whether their job title defines them as workers or supervisors. Much of the information provided is general; however, some information is specific for formalin. When employee exposure to formaldehyde is from resins capable of releasing formaldehyde, the resin itself and other impurities or decomposition products may also be toxic, and employers should include this information as well when informing employees of the hazards associated with the materials they handle. The precise hazards associated with exposure to formaldehyde depend both on the form (solid, liquid, or gas) of the material and the concentration of formaldehyde present. For example, 37–50 percent solutions of formaldehyde present a much greater hazard to the skin and eyes from spills or splashes than solutions containing less than 1 percent formaldehyde. Individual Substance Technical Guidelines used by the employer for training employees should be modified to properly give information on the material actually being used.

Substance Identification

Chemical Name: Formaldehyde
Chemical Family: Aldehyde
Chemical Formula: HCHO
Molecular Weight: 30.03
Chemical Abstracts Service Number (CAS Number): 50–00–0

Synonyms: Formalin; Formic Aldehyde; Paraform; Formol; Formalin (Methanol-free); Fyde; Formalith; Methanal; Methyl Aldehyde; Methylene Glycol; Methylene Oxide; Tetraoxymethalene; Oxomethane; Oxymethylene

Components and Contaminants

Percent: 37.0 Formaldehyde
Percent: 63.0 Water

(Note.—Inhibited solutions contain methanol.)

Other Contaminants: Formic acid (alcohol free)
Exposure Limits:

OSHA TWA—0.75 ppm
OSHA STEL—2 ppm

Physical Data

Description: Colorless liquid, pungent odor
Boiling point: 214° F (101 °C)
Specific Gravity: 1.08 (H_2O=1 @ 20 °C)
pH: 2.8–4.0
Solubility in Water: Miscible
Solvent Solubility: Soluble in alcohol and acetone
Vapor Density: 1.04 (Air=1 @ 20 °C)
Odor Threshold: 0.8–1 ppm

Fire and Explosion Hazard

Moderate fire and explosion hazard when exposed to heat or flame.

The flash point of 37% formaldehyde solutions is above normal room temperature, but the explosion range is very wide, from 7 to 73% by volume in air.

Reaction of formaldehyde with nitrogen dioxide, nitromethane, perchloric acid and aniline, or peroxyformic acid yields explosive compounds.

Flash Point: 185 °F (85 °C) closed cup
Lower Explosion Limit: 7%
Upper Explosion Limit: 73%
Autoignition Temperature: 806 °F (430 °C)
Flammability Class (OSHA): III A

Extinguishing Media: Use dry chemical, "alcohol foam", carbon dioxide, or water in flooding amounts as fog. Solid streams may not be effective. Cool fire-exposed containers with water from side until well after fire is out.

Use of water spray to flush spills can also dilute the spill to produce nonflammable mixtures. Water runoff, however, should be contained for treatment.

National Fire Protection Association Section 325M Designation:

Health: 2—Materials hazardous to health, but areas may be entered with full-faced mask self-contained breathing apparatus which provides eye protection.

Flammability: 2—Materials which must be moderately heated before ignition will occur. Water spray may be used to extinguish the fire because the material can be cooled below its flash point.

Reactivity: D—Materials which (in themselves) are normally stable even under fire exposure conditions and which are not reactive with water. Normal fire fighting procedures may be used.

Reactivity

Stability: Formaldehyde solutions may self-polymerize to form paraformaldehyde which precipitates.

Incompatibility (Materials to Avoid): Strong oxidizing agents, caustics, strong alkalies, isocyanates, anhydrides, oxides, and inorganic acids. Formaldehyde reacts with hydrochloric acid to form the potent carcinogen, bis-chloromethyl ether. Formaldehyde reacts with nitrogen dioxide, nitromethane, perchloric acid and aniline, or peroxyformic acid to yield explosive compounds. A violent reaction occurs when formaldehyde is mixed with strong oxidizers.

Hazardous Combustion or Decomposition Products: Oxygen from the air can oxidize formaldehyde to formic acid, especially when heated. Formic acid is corrosive.

Health Hazard Data

Acute Effects of Exposure

Ingestion (Swallowing): Liquids containing 10 to 40% formaldehyde cause severe irritation and inflammation of the mouth, throat, and stomach. Severe stomach pains will follow ingestion with possible loss of consciousness and death. Ingestion of dilute formaldehyde solutions (0.03–0.04%) may cause discomfort in the stomach and pharynx.

Inhalation (Breathing): Formaldehyde is highly irritating to the upper respiratory tract and eyes. Concentrations of 0.5 to 2.0 ppm may irritate the eyes, nose, and throat of some individuals. Concentrations of 3 to 5 ppm also cause tearing of the eyes and are intolerable to some persons. Concentrations of 10 to 20 ppm cause difficulty in breathing, burning of the nose and throat, cough, and heavy tearing of the eyes, and 25 to 30 ppm causes severe respiratory tract injury leading to pulmonary edema and pneumonitis. A concentration of 100 ppm is immediately dangerous to life and health. Deaths from accidental exposure to high concentrations of formaldehyde have been reported.

Skin (Dermal): Formalin is a severe skin irritant and a sensitizer. Contact with formalin causes white discoloration, smarting, drying, cracking, and scaling. Prolonged and repeated contact can cause numbness and a hardening or tanning of the skin. Previously exposed persons may react to future exposure with an allergic eczematous dermatitis or hives.

Eye Contact: Formaldehyde solutions splashed in the eye can cause injuries ranging from transient discomfort to severe, permanent corneal clouding and loss of vision. The severity of the effect depends on the concentration of formaldehyde in the solution and whether or not the eyes are flushed with water immediately after the accident.

Note.—The perception of formaldehyde by odor and eye irritation becomes less sensitive with time as one adapts to formaldehyde. This can lead to overexposure if a worker is relying on formaldehyde's warning properties to alert him or her to the potential for exposure.

Acute Animal Toxicity:
Oral, rats: LD50=800 mg/kg
Oral, mouse: LD50=42 mg/kg
Inhalation, rats: LCLo=250 mg/kg
Inhalation, mouse: LCLo=900 mg/kg
Inhalation, rats: LC50=590 mg/kg

Chronic Effects of Exposure

Carcinogenicity: Formaldehyde has the potential to cause cancer in humans. Repeated and prolonged exposure increases the risk. Various animal experiments have conclusively shown formaldehyde to be a carcinogen in rats. In humans, formaldehyde exposure has been associated with cancers of the lung, nasopharynx and oropharynx, and nasal passages.

Mutagenicity: Formaldehyde is genotoxic in several *in vitro* test systems showing properties of both an initiator and a promoter.

Toxicity: Prolonged or repeated exposure to formaldehyde may result in respiratory impairment. Rats exposed to formaldehyde at 2 ppm developed benign nasal tumors and changes of the cell structure in the nose as well as inflamed mucous membranes of the nose. Structural changes in the epithelial cells in the human nose have also been observed. Some persons have developed asthma or bronchitis following exposure to formaldehyde, most often as the result of an accidental spill involving a single exposure to a high concentration of formaldehyde.

Emergency and First Aid Procedures

Ingestion (Swallowing): If the victim is conscious, dilute, inactivate, or absorb the ingested formaldehyde by giving milk, activated charcoal, or water. Any organic material will inactivate formaldehyde. Keep affected person warm and at rest. Get medical attention immediately. If vomiting occurs, keep head lower than hips.

Inhalation (Breathing): Remove the victim from the exposure area to fresh air

immediately. Where the formaldehyde concentration may be very high, each rescuer must put on a self-contained breathing apparatus before attempting to remove the victim, and medical personnel should be informed of the formaldehyde exposure immediately. If breathing has stopped, give artificial respiration. Keep the affected person warm and at rest. Qualified first-aid or medical personnel should administer oxygen, if available, and maintain the patient's airways and blood pressure until the victim can be transported to a medical facility. If exposure results in a highly irritated upper respiratory tract and coughing continues for more than 10 minutes, the worker should be hospitalized for observation and treatment.

Skin Contact: Remove contaminated clothing (including shoes) immediately. Wash the affected area of your body with soap or mild detergent and large amounts of water until no evidence of the chemical remains (at least 15 to 20 minutes). If there are chemical burns, get first aid to cover the area with sterile, dry dressing, and bandages. Get medical attention if you experience appreciable eye or respiratory irritation.

Eye Contact: Wash the eyes immediately with large amounts of water occasionally lifting lower and upper lids, until no evidence of chemical remains (at least 15 to 20 minutes). In case of burns, apply sterile bandages loosely without medication. Get medical attention immediately. If you have experienced appreciable eye irritation from a splash or excessive exposure, you should be referred promptly to an opthamologist for evaluation.

Emergency Procedures

Emergencies: If you work in an area where a large amount of formaldehyde could be released in an accident or from equipment failure, your employer must develop procedures to be followed in event of an emergency. You should be trained in your specific duties in the event of an emergency, and it is important that you clearly understand these duties. Emergency equipment must be accessible and you should be trained to use any equipment that you might need. Formaldehyde contaminated equipment must be cleaned before reuse.

If a spill of appreciable quantity occurs, leave the area quickly unless you have specific emergency duties. Do not touch spilled material. Designated persons may stop the leak and shut off ignition sources if these procedures can be done without risk. Designated persons should isolate the hazard area and deny entry except for necessary people protected by suitable protective clothing and respirators adequate for the exposure. Use water spray to reduce vapors. Do not smoke, and prohibit all flames or flares in the hazard area.

Special Firefighting Procedures: Learn procedures and responsibilities in the event of a fire in your workplace. Become familiar with the appropriate equipment and supplies and their location. In firefighting, withdraw immediately in case of rising sound from venting safety device or any discoloration of storage tank due to fire.

Spill, Leak, and Disposal Procedures

Occupational Spill: For small containers, place the leaking container in a well ventilated area. Take up small spills with absorbent material and place the waste into properly labeled containers for later disposal. For larger spills, dike the spill to minimize contamination and facilitate salvage or disposal. You may be able to neutralize the spill with sodium hydroxide or sodium sulfite. Your employer must comply with EPA rules regarding the clean-up of toxic waste and notify state and local authorities, if required. If the spill is greater than 1,000 lb/day, it is reportable under EPA's Superfund legislation.

Waste Disposal: Your employer must dispose of waste containing formaldehyde in accordance with applicable local, state, and Federal law and in a manner that minimizes exposure of employees at the site and of the clean-up crew.

Monitoring and Measurement Procedures

Monitoring Requirements: If your exposure to formaldehyde exceeds the 0.5 ppm action level or the 2 ppm STEL, your employer must monitor your exposure. Your employer need not measure every exposure if a "high exposure" employee can be identified. This person usually spends the greatest amount of time nearest the process equipment. If you are a "representative employee", you will be asked to wear a sampling device to collect formaldehyde. This device may be a passive badge, a sorbent tube attached to a pump, or an impinger containing liquid. You should perform your work as usual, but inform the person who is conducting the monitoring of any difficulties you are having wearing the device.

Evaluation of 8-hour Exposure: Measurements taken for the purpose of determining time-weighted average (TWA) exposures are best taken with samples covering the full shift. Samples collected must be taken from the employee's breathing zone air.

Short-term Exposure Evaluation: If there are tasks that involve brief but intense exposure to formaldehyde, employee exposure must be measured to assure compliance with the STEL. Sample collections are for brief periods, only 15 minutes, but several samples may be needed to identify the peak exposure.

Monitoring Techniques: OSHA's only requirement for selecting a method for sampling and analysis is that the methods used accurately evaluate the concentration of formaldehyde in employees' breathing zones. Sampling and analysis may be performed by collection of formaldehyde on liquid or solid sorbents with subsequent chemical analysis. Sampling and analysis may also be performed by passive diffusion monitors and short-term exposure may be measured by instruments such as real-time continuous monitoring systems and portable direct reading instruments.

Notification of Results: Your employer must inform you of the results of exposure monitoring representative of your job. You may be informed in writing, but posting the results where you have ready access to them constitutes compliance with the standard.

Protective Equipment and Clothing

[Material impervious to formaldehyde is needed if the employee handles formaldehyde solutions of 1% or more. Other employees may also require protective clothing or equipment to prevent dermatitis.]

Respiratory Protection: Use NIOSH-approved full facepiece negative pressure respirators equipped with approved cartridges or canisters within the use limitations of these devices. (Present restrictions on cartridges and canisters do not permit them to be used for a full workshift.) In all other situations, use positive pressure respirators such as the positive-pressure air purifying respirator or the self-contained breathing apparatus (SCBA). If you use a negative pressure respirator, your employer must provide you with fit testing of the respirator at least once a year in accordance with the procedures outlined in Appendix E.

Protective Gloves: Wear protective (impervious) gloves provided by your employer, at no cost, to prevent contact with formalin. Your employer should select these gloves based on the results of permeation testing and in accordance with the ACGIH Guidelines for Selection of Chemical Protective Clothing.

Eye Protection: If you might be splashed in the eyes with formalin, it is essential that you wear goggles or some other type of complete protection for the eye. You may also need a face shield if your face is likely to be splashed with formalin, but you must not substitute face shields for eye protection. (This section pertains to formaldehyde solutions of 1% or more.)

Other Protective Equipment: You must wear protective (impervious) clothing and equipment provided by your employer at no cost to prevent repeated or prolonged contact with formaldehyde liquids. If you are required to change into whole-body chemical protective clothing, your employer must provide a change room for your privacy and for storage of your normal clothing.

If you are splashed with formaldehyde, use the emergency showers and eyewash fountains provided by your employer immediately to prevent serious injury. Report the incident to your supervisor and obtain necessary medical support.

Entry Into an IDLH Atmosphere

Enter areas where the formaldehyde concentration might be 100 ppm or more only with complete body protection including a self-contained breathing apparatus with a full facepiece operated in a positive pressure mode or a supplied air respirator with full facepiece and operated in a positive pressure mode. This equipment is essential to protect your life and health under such extreme conditions.

Engineering Controls

Ventilation is the most widely applied engineering control method for reducing the concentration of airborne substances in the breathing zones of workers. There are two distinct types of ventilation.

Local Exhaust: Local exhaust ventilation is designed to capture airborne contaminants as near to the point of generation as possible. To protect you, the direction of contaminant

flow must always be toward the local exhaust system inlet and away from you.

General (Mechanical): General dilution ventilation involves continuous introduction of fresh air into the workroom to mix with the contaminated air and lower your breathing zone concentration of formaldehyde. Effectiveness depends on the number of air changes per hour. Where devices emitting formaldehyde are spread out over a large area, general dilution ventilation may be the only practical method of control.

Work Practices: Work practices and administrative procedures are an important part of a control system. If you are asked to perform a task in a certain manner to limit your exposure to formaldehyde, it is extremely important that you follow these procedures.

Medical Surveillance

Medical surveillance helps to protect employees' health. You are encouraged strongly to participate in the medical surveillance program.

Your employer must make a medical surveillance program available at no expense to you and at a reasonable time and place if you are exposed to formaldehyde at concentrations above 0.5 ppm as an 8-hour average or 2 ppm over any 15-minute period. You will be offered medical surveillance at the time of your initial assignment and once a year afterward as long as your exposure is at least 0.5 ppm (TWA) or 2 ppm (STEL). Even if your exposure is below these levels, you should inform your employer if you have signs and symptoms that you suspect, through your training, are related to your formaldehyde exposure because you may need medical surveillance to determine if your health is being impaired by your exposure.

The surveillance plan includes:

(a) A medical disease questionnaire.

(b) A physical examination if the physician determines this is necessary.

If you are required to wear a respirator, your employer must offer you a physical examination and a pulmonary function test every year.

The physician must collect all information needed to determine if you are at increased risk from your exposure to formaldehyde. At the physician's discretion, the medical examination may include other tests, such as a chest x-ray, to make this determination.

After a medical examination the physician will provide your employer with a written opinion which includes any special protective measures recommended and any restrictions on your exposure. The physician must inform you of any medical conditions you have which would be aggravated by exposure to formaldehyde.

All records from your medical examinations, including disease surveys, must be retained at your employer's expense.

Emergencies

If you are exposed to formaldehyde in an emergency and develop signs or symptoms associated with acute toxicity from formaldehyde exposure, your employer must provide you with a medical examination as soon as possible. This medical examination will include all steps necessary to stabilize your health. You may be kept in the hospital for observation if your symptoms are severe to ensure that any delayed effects are recognized and treated.

Appendix B to §1915.1048—Sampling Strategy and Analytical Methods for Formaldehyde

To protect the health of employees, exposure measurements must be unbiased and representative of employee exposure. The proper measurement of employee exposure requires more than a token commitment on the part of the employer. OSHA's mandatory requirements establish a baseline; under the best of circumstances all questions regarding employee exposure will be answered. Many employers, however, will wish to conduct more extensive monitoring before undertaking expensive commitments, such as engineering controls, to assure that the modifications are truly necessary. The following sampling strategy, which was developed at NIOSH by Nelson A. Leidel, Kenneth A. Busch, and Jeremiah R. Lynch and described in NIOSH publication No. 77–173 (Occupational Exposure Sampling Strategy Manual) will assist the employer in developing a strategy for determining the exposure of his or her employees.

There is no one correct way to determine employee exposure. Obviously, measuring the exposure of every employee exposed to formaldehyde will provide the most information on any given day. Where few employees are exposed, this may be a practical solution. For most employers, however, use of the following strategy will give just as much information at less cost.

Exposure data collected on a single day will not automatically guarantee the employer that his or her workplace is always in compliance with the formaldehyde standard. This does not imply, however, that it is impossible for an employer to be sure that his or her worksite is in compliance with the standard. Indeed, a properly designed sampling strategy showing that all employees are exposed below the PELs, at least with a 95 percent certainty, is compelling evidence that the exposure limits are being achieved provided that measurements are conducted using valid sampling strategy and approved analytical methods.

There are two PELs, the TWA concentration and the STEL. Most employers will find that one of these two limits is more critical in the control of their operations, and OSHA expects that the employer will concentrate monitoring efforts on the critical component. If the more difficult exposure is controlled, this information, along with calculations to support the assumptions, should be adequate to show that the other exposure limit is also being achieved.

Sampling Strategy

Determination of the Need for Exposure Measurements

The employer must determine whether employees may be exposed to concentrations in excess of the action level. This determination becomes the first step in an employee exposure monitoring program that minimizes employer sampling burdens while providing adequate employee protection. If employees may be exposed above the action level, the employer must measure exposure. Otherwise, an objective determination that employee exposure is low provides adequate evidence that exposure potential has been examined.

The employer should examine all available relevant information, *eg.* insurance company and trade association data and information from suppliers or exposure data collected from similar operations. The employer may also use previously-conducted sampling including area monitoring. The employer must make a determination relevant to each operation although this need not be on a separate piece of paper. If the employer can demonstrate conclusively that no employee is exposed above the action level or the STEL through the use of objective data, the employer need proceed no further on employee exposure monitoring until such time that conditions have changed and the determination is no longer valid.

If the employer cannot determine that employee exposure is less than the action level and the STEL, employee exposure monitoring will have to be conducted.

Workplace Material Survey

The primary purpose of a survey of raw material is to determine if formaldehyde is being used in the work environment and if so, the conditions under which formaldehyde is being used.

The first step is to tabulate all situations where formaldehyde is used in a manner such that it may be released into the workplace atmosphere or contaminate the skin. This information should be available through analysis of company records and information on the MSDSs available through provisions of this standard and the Hazard Communication standard.

If there is an indication from materials handling records and accompanying MSDSs that formaldehyde is being used in the following types of processes or work operations, there may be a potential for releasing formaldehyde into the workplace atmosphere:

(1) Any operation that involves grinding, sanding, sawing, cutting, crushing, screening, sieving, or any other manipulation of material that generates formaldehyde-bearing dust

(2) Any processes where there have been employee complaints or symptoms indicative of exposure to formaldehyde

(3) Any liquid or spray process involving formaldehyde

(4) Any process that uses formaldehyde in preserved tissue

(5) Any process that involves the heating of a formaldehyde-bearing resin.

Processes and work operations that use formaldehyde in these manners will probably require further investigation at the worksite to determine the extent of employee monitoring that should be conducted.

Workplace Observations

To this point, the only intention has been to provide an indication as to the existence of potentially exposed employees. With this information, a visit to the workplace is needed to observe work operations, to

identify potential health hazards, and to determine whether any employees may be exposed to hazardous concentrations of formaldehyde.

In many circumstances, sources of formaldehyde can be identified through the sense of smell. However, this method of detection should be used with caution because of olfactory fatigue.

Employee location in relation to source of formaldehyde is important in determining if an employee may be significantly exposed to formaldehyde. In most instances, the closer a worker is to the source, the higher the probability that a significant exposure will occur.

Other characteristics should be considered. Certain high temperature operations give rise to higher evaporation rates. Locations of open doors and windows provide natural ventilation that tend to dilute formaldehyde emissions. General room ventilation also provides a measure of control.

Calculation of Potential Exposure Concentrations

By knowing the ventilation rate in a workplace and the quantity of formaldehyde generated, the employer may be able to determine by calculation if the PELs might be exceeded. To account for poor mixing of formaldehyde into the entire room, locations of fans and proximity of employees to the work operation, the employer must include a safety factor. If an employee is relatively close to a source, particularly if he or she is located downwind, a safety factor of 100 may be necessary. For other situations, a factor of 10 may be acceptable. If the employer can demonstrate through such calculations that employee exposure does not exceed the action level or the STEL, the employer may use this information as objective data to demonstrate compliance with the standard.

Sampling Strategy

Once the employer determines that there is a possibility of substantial employee exposure to formaldehyde, the employer is obligated to measure employee exposure.

The next step is selection of a maximum risk employee. When there are different processes where employees may be exposed to formaldehyde, a maximum risk employee should be selected for each work operation.

Selection of the maximum risk employee requires professional judgment. The best procedure for selecting the maximum risk employee is to observe employees and select the person closest to the source of formaldehyde. Employee mobility may affect this selection; *eg.* if the closest employee is mobile in his tasks, he may not be the maximum risk employee. Air movement patterns and differences in work habits will also affect selection of the maximum risk employee.

When many employees perform essentially the same task, a maximum risk employee cannot be selected. In this circumstance, it is necessary to resort to random sampling of the group of workers. The objective is to select a subgroup of adequate size so that there is a high probability that the random sample will contain at least one worker with high exposure if one exists. The number of persons in the group influences the number that need to be sampled to ensure that at least one individual from the highest 10 percent exposure group is contained in the sample. For example, to have 90 percent confidence in the results, if the group size is 10, nine should be sampled; for 50, only 18 need to be sampled.

If measurement shows exposure to formaldehyde at or above the action level or the STEL, the employer needs to identify all other employees who may be exposed at or above the action level or STEL and measure or otherwise accurately characterize the exposure of these employees.

Whether representative monitoring or random sampling are conducted, the purpose remains the same—to determine if the exposure of any employee is above the action level. If the exposure of the most exposed employee is less than the action level and the STEL, regardless of how the employee is identified, then it is reasonable to assume that measurements of exposure of the other employees in that operation would be below the action level and the STEL.

Exposure Measurements

There is no "best" measurement strategy for all situations. Some elements to consider in developing a strategy are:

(1) Availability and cost of sampling equipment

(2) Availability and cost of analytic facilities

(3) Availability and cost of personnel to take samples

(4) Location of employees and work operations

(5) Intraday and interday variations in the process

(6) Precision and accuracy of sampling and analytic methods, and

(7) Number of samples needed.

Samples taken for determining compliance with the STEL differ from those that measure the TWA concentration in important ways. STEL samples are best taken in a nonrandom fashion using all available knowledge relating to the area, the individual, and the process to obtain samples during periods of maximum expected concentrations. At least three measurements on a shift are generally needed to spot gross errors or mistakes; however, only the highest value represents the STEL.

If an operation remains constant throughout the workshift, a much greater number of samples would need to be taken over the 32 discrete nonoverlapping periods in an 8-hour workshift to verify compliance with a STEL. If employee exposure is truly uniform throughout the workshift, however, an employer in compliance with the 1 ppm TWA would be in compliance with the 2 ppm STEL, and this determination can probably be made using objective data.

Need to Repeat the Monitoring Strategy

Interday and intraday fluctuations in employee exposure are mostly influenced by the physical processes that generate formaldehyde and the work habits of the employee. Hence, in-plant process variations influence the employer's determination of whether or not additional controls need to be imposed. Measurements that employee exposure is low on a day that is not representative of worst conditions may not provide sufficient information to determine whether or not additional engineering controls should be installed to achieve the PELs.

The person responsible for conducting sampling must be aware of systematic changes which will negate the validity of the sampling results. Systematic changes in formaldehyde exposure concentration for an employee can occur due to:

(1) The employee changing patterns of movement in the workplace

(2) Closing of plant doors and windows

(3) Changes in ventilation from season to season

(4) Decreases in ventilation efficiency or abrupt failure of engineering control equipment

(5) Changes in the production process or work habits of the employee.

Any of these changes, if they may result in additional exposure that reaches the next level of action (*i.e.* 0.5 or 1.0 ppm as an 8-hr average or 2 ppm over 15 minutes) require the employer to perform additional monitoring to reassess employee exposure.

A number of methods are suitable for measuring employee exposure to formaldehyde or for characterizing emissions within the worksite. The preamble to this standard describes some methods that have been widely used or subjected to validation testing. A detailed analytical procedure derived from the OSHA Method 52 for acrolein and formaldehyde is presented below for informational purposes.

Inclusion of OSHA's method in this appendix in no way implies that it is the only acceptable way to measure employee exposure to formaldehyde. Other methods that are free from significant interferences and that can determine formaldehyde at the permissible exposure limits within ±25 percent of the "true" value at the 95 percent confidence level are also acceptable. Where applicable, the method shou1d a1so be capab1e of measuring formaldehyde at the action level to ±35 percent of the "true" value with a 95 percent confidence level. OSHA encourages emp1oyers to choose methods that will be best for their individual needs. The employer must exercise caution, however, in choosing an appropriate method since some techniques suffer from interferences that are likely to be present in workplaces of certain industry sectors where formaldehyde is used.

OSHA's Analytical Laboratory Method

Method No: 52

Matrix: Air

Target Concentration: 1 ppm (1.2 mg/m^3)

Procedures: Air samples are collected by drawing known volumes of air through sampling tubes containing XAD–2 adsorbent which have been coated with 2-(hydroxymethyl) piperidine. The samples are desorbed with toluene and then analyzed by gas chromatography using a nitrogen selective detector.

Recommended Sampling Rate and Air Volumes: 0.1 L/min and 24 L

Reliable Quantitation Limit: 16 ppb (20 μg/m^3)

Standard Error of Estimate at the Target Concentration: 7.3%

Status of the Method: A sampling and analytical method that has been subjected to the established evaluation procedures of the Organic Methods Evaluation Branch.

Date: March 1985

1. *General Discussion*

1.1 *Background:* The current OSHA method for collecting acrolein vapor recommends the use of activated 13X molecular sieves. The samples must be stored in an ice bath during and after sampling and also they must be analyzed within 48 hours of collection. The current OSHA method for collecting formaldehyde vapor recommends the use of bubblers containing 10% methanol in water as the trapping solution.

This work was undertaken to resolve the sample stability problems associated with acrolein and also to eliminate the need to use bubblers to sample formaldehyde. A goal of this work was to develop and/or to evaluate a common sampling and analytical procedure for acrolein and formaldehyde.

NIOSH has developed independent methodologies for acrolein and formaldehyde which recommend the use of reagent-coated adsorbent tubes to collect the aldehydes as stable derivatives. The formaldehyde sampling tubes contain Chromosorb 102 adsorbent coated with N-benzylethanolamine (BEA) which reacts with formaldehyde vapor to form a stable oxazolidine compound. The acrolein sampling tubes contain XAD–2 adsorbent coated with 2-(hydroxymethyl)piperidine (2–HMP) which reacts with acrolein vapor to form a different, stable oxazolidine derivative. Acrolein does not appear to react with BEA to give a suitable reaction product. Therefore, the formaldehyde procedure cannot provide a common method for both aldehydes. However, formaldehyde does react with 2–HMP to form a very suitable reaction product. It is the quantitative reaction of acrolein and formaldehyde with 2–HMP that provides the basis for this evaluation.

This sampling and analytical procedure is very similar to the method recommended by NIOSH for acrolein. Some changes in the NIOSH methodology were necessary to permit the simultaneous determination of both aldehydes and also to accommodate OSHA laboratory equipment and analytical techniques.

1.2 *Limit-defining parameters:* The analyte air concentrations reported in this method are based on the recommended air volume for each analyte collected separately and a desorption volume of 1 mL. The amounts are presented as acrolein and/or formaldehyde, even though the derivatives are the actual species analyzed.

1.2.1 *Detection limits of the analytical procedure:* The detection limit of the analytical procedure was 386 pg per injection for formaldehyde. This was the amount of analyte which gave a peak whose height was about five times the height of the peak given by the residual formaldehyde derivative in a typical blank front section of the recommended sampling tube.

1.2.2 *Detection limits of the overall procedure:* The detection limits of the overall procedure were 482 ng per sample (16 ppb or 20 μg/m³ for formaldehyde). This was the amount of analyte spiked on the sampling device which allowed recoveries approximately equal to the detection limit of the analytical procedure.

1.2.3 *Reliable quantitation limits:* The reliable quantitation limit was 482 ng per sample (16 ppb or 20 μg/m³) for formaldehyde. These were the smallest amounts of analyte which could be quantitated within the limits of a recovery of at least 75% and a precision (±1.96 SD) of ±25% or better.

The reliable quantitation limit and detection limits reported in the method are based upon optimization of the instrument for the smallest possible amount of analyte. When the target concentration of an analyte is exceptionally higher than these limits, they may not be attainable at the routine operating parameters.

1.2.4 *Sensitivity:* The sensitivity of the analytical procedure over concentration ranges representing 0.4 to 2 times the target concentration, based on the recommended air volumes, was 7,589 area units per μg/mL for formaldehyde. This value was determined from the slope of the calibration curve. The sensitivity may vary with the particular instrument used in the analysis.

1.2.5 *Recovery:* The recovery of formaldehyde from samples used in an 18-day storage test remained above 92% when the samples were stored at ambient temperature. These values were determined from regression lines which were calculated from the storage data. The recovery of the analyte from the collection device must be at least 75% following storage.

1.2.6 *Precision (analytical method only):* The pooled coefficient of variation obtained from replicate determinations of analytical standards over the range of 0.4 to 2 times the target concentration was 0.0052 for formaldehyde (Section 4.3).

1.2.7 *Precision (overall procedure):* The precision at the 95% confidence level for the ambient temperature storage tests was ±14.3% for formaldehyde. These values each include an additional ±5% for sampling error. The overall procedure must provide results at the target concentrations that are ±25% at the 95% confidence level.

1.2.8 *Reproducibility:* Samples collected from controlled test atmospheres and a draft copy of this procedure were given to a chemist unassociated with this evaluation. The formaldehyde samples were analyzed following 15 days storage. The average recovery was 96.3% and the standard deviation was 1.7%.

1.3 *Advantages:*

1.3.1 The sampling and analytical procedures permit the simultaneous determination of acrolein and formaldehyde.

1.3.2 Samples are stable following storage at ambient temperature for at least 18 days.

1.4 *Disadvantages:* None.

2. *Sampling Procedure*

2.1 *Apparatus:*

2.1.1 Samples are collected by use of a personal sampling pump that can be calibrated to within ±5% of the recommended 0.1 L/min sampling rate with the sampling tube in line.

2.1.2 Samples are collected with laboratory prepared sampling tubes. The sampling tube is constructed of silane treated glass and is about 8-cm long. The ID is 4 mm and the OD is 6 mm. One end of the tube is tapered so that a glass wool end plug will hold the contents of the tube in place during sampling. The other end of the sampling tube is open to its full 4-mm ID to facilitate packing of the tube. Both ends of the tube are fire-polished for safety. The tube is packed with a 75-mg backup section, located nearest the tapered end and a 150-mg sampling section of pretreated XAD–2 adsorbent which has been coated with 2–HMP. The two sections of coated adsorbent are separated and retained with small plugs of silanized glass wool. Following packing, the sampling tubes are sealed with two 7/32 inch OD plastic end caps. Instructions for the pretreatment and the coating of XAD–2 adsorbent are presented in Section 4 of this method.

2.1.3 Sampling tubes, similar to those recommended in this method, are marketed by Supelco, Inc. These tubes were not available when this work was initiated; therefore, they were not evaluated.

2.2 *Reagents:* None required.

2.3 *Technique:*

2.3.1 Properly label the sampling tube before sampling and then remove the plastic end caps.

2.3.2 Attach the sampling tube to the pump using a section of flexible plastic tubing such that the large, front section of the sampling tube is exposed directly to the atmosphere. Do not place any tubing ahead of the sampling tube. The sampling tube should be attached in the worker's breathing zone in a vertical manner such that it does not impede work performance.

2.3.3 After sampling for the appropriate time, remove the sampling tube from the pump and then seal the tube with plastic end caps.

2.3.4 Include at least one blank for each sampling set. The blank should be handled in the same manner as the samples with the exception that air is not drawn through it.

2.3.5 List any potential interferences on the sample data sheet.

2.4 *Breakthrough:*

2.4.1 Breakthrough was defined as the relative amount of analyte found on a backup sample in relation to the total amount of analyte collected on the sampling train.

2.4.2 For formaldehyde collected from test atmospheres containing 6 times the PEL, the average 5% breakthrough air volume was 41 L. The sampling rate was 0.1 L/min and the average mass of formaldehyde collected was 250 μg.

2.5 *Desorption Efficiency:* No desorption efficiency corrections are necessary to compute air sample results because analytical standards are prepared using coated adsorbent. Desorption efficiencies were determined, however, to investigate the recoveries of the analytes from the sampling device. The average recovery over the range of 0.4 to 2 times the target concentration, based on the recommended air volumes, was 96.2% for formaldehyde. Desorption efficiencies were essentially constant over the ranges studied.

2.6 *Recommended Air Volume and Sampling Rate:*

2.6.1 The recommended air volume for formaldehyde is 24 L.

2.6.2 The recommended sampling rate is 0.1 L/min.

2.7 *Interferences:*

2.7.1 Any collected substance that is capable of reacting 2-HMP and thereby depleting the derivatizing agent is a potential interference. Chemicals which contain a carbonyl group, such as acetone, may be capable or reacting with 2-HMP.

2.7.2 There are no other known interferences to the sampling method.

2.8 *Safety Precautions:*

2.8.1 Attach the sampling equipment to the worker in such a manner that it well not interfere with work performance or safety.

2.8.2 Follow all safety practices that apply to the work area being sampled.

3. *Analytical Procedure*

3.1 *Apparatus:*

3.1.1 A gas chromatograph (GC), equipped with a nitrogen selective detector. A Hewlett-Packard Model 5840A GC fitted with a nitrogen-phosphorus flame ionization detector (NPD) was used for this evaluation. Injections were performed using a Hewlett-Packard Model 7671A automatic sampler.

3.1.2 A GC column capable of resolving the analytes from any interference. A 6 ft x ¼ in OD (2mm ID) glass GC column containing 10% UCON 50–HB–5100 + 2% KOH on 80/100 mesh Chromosorb W–AW was used for the evaluation. Injections were performed on-column.

3.1.3 Vials, glass 2-mL with Teflon-lined caps.

3.1.4 Volumetric flasks, pipets, and syringes for preparing standards, making dilutions, and performing injections.

3.2 *Reagents:*

3.2.1 Toluene and dimethylformamide. Burdick and Jackson solvents were used in this evaluation.

3.2.2 Helium, hydrogen, and air, GC grade.

3.2.3 Formaldehyde, 37%, by weight, in water. Aldrich Chemical, ACS Reagent Grade formaldehyde was used in this evaluation.

3.2.4 Amberlite XAD–2 adsorbent coated with 2-(hydroxymethyl—piperidine (2-HMP), 10% by weight (Section 4).

3.2.5 Desorbing solution with internal standard. This solution was prepared by adding 20 µL of dimethylformamide to 100 mL of toluene.

3.3 *Standard preparation:*

3.3.1 *Formaldehyde:* Prepare stock standards by diluting known volumes of 37% formaldehyde solution with methanol. A procedure to determine the formaldehyde content of these standards is presented in Section 4. A standard containing 7.7 mg/mL formaldehyde was prepared by diluting 1 mL of the 37% reagent to 50 mL with methanol.

3.3.2 It is recommended that analytical standards be prepared about 16 hours before the air samples are to be analyzed in order to ensure the complete reaction of the analytes with 2–HMP. However, rate studies have shown the reaction to be greater than 95% complete after 4 hours. Therefore, one or two standards can be analyzed after this reduced time if sample results are outside the concentration range of the prepared standards.

3.3.3 Place 150-mg portions of coated XAD–2 adsorbent, from the same lot number as used to collect the air samples, into each of several glass 2-mL vials. Seal each vial with a Teflon-lined cap.

3.3.4 Prepare fresh analytical standards each day by injecting appropriate amounts of the diluted analyte directly onto 150-mg portions of coated adsorbent. It is permissible to inject both acrolein and formaldehyde on the same adsorbent portion. Allow the standards to stand at room temperature. A standard, approximately the target levels, was prepared by injecting 11 µL of the acrolein and 12 µL of the formaldehyde stock standards onto a single coated XAD–2 adsorbent portion.

3.3.5 Prepare a sufficient number of standards to generate the calibration curves. Analytical standard concentrations should bracket sample concentrations. Thus, if samples are not in the concentration range of the prepared standards, additional standards must be prepared to determine detector response.

3.3.7 Desorb the standards in the same manner as the samples following the 16-hour reaction time.

3.4 *Sample preparation:*

3.4.1 Transfer the 150-mg section of the sampling tube to a 2-mL vial. Place the 75-mg section in a separate vial. If the glass wool plugs contain a significant number of adsorbent beads, place them with the appropriate sampling tube section. Discard the glass wool plugs if they do not contain a significant number of adsorbent beads.

3.4.2 Add 1 mL of desorbing solution to each vial.

3.4.3 Seal the vials with Teflon-lined caps and then allow them to desorb for one hour. Shake the vials by hand with vigorous force several times during the desorption time.

3.4.4 Save the used sampling tubes to be cleaned and recycled.

3.5 *Analysis:*

3.5.1 GC *Conditions*

Column Temperature:

Bi-level temperature program—First level: 100 to 140 °C at 4 °C/min following completion of the first level.

Second level: 140 to 180 °C at 20 °C/min following completion of the first level.

Isothermal period: Hold column at 180 °C until the recorder pen returns to baseline (usually about 25 min after injection).

Injector temperature: 180 °C

Helium flow rate: 30 mL/min (detector response will be reduced if nitrogen is substituted for helium carrier gas).

Injection volume: 0.8 µL

GC column: Six-ft x ¼-in OD (2 mm ID) glass GC column containing 10% UCON 50–HB–5100 + 2% KOH on 80/100 Chromosorb W–AW.

NPD conditions:

Hydrogen flow rate: 3 mL/min

Air flow rate: 50 mL/min

Detector temperature: 275 °C

3.5.2 *Chromatogram:* For an example of a typical chromatogram, see Figure 4.11 in OSHA Method 52.

3.5.3 Use a suitable method, such as electronic integration, to measure detector response.

3.5.4 Use an internal standard method to prepare the calibration curve with several standard solutions of different concentrations. Prepare the calibration curve daily. Program the integrator to report results in µg/mL.

3.5.5 Bracket sample concentrations with standards.

3.6 *Interferences (Analytical)*

3.6.1 Any compound with the same general retention time as the analytes and which also gives a detector response is a potential interference. Possible interferences should be reported to the laboratory with submitted samples by the industrial hygienist.

3.6.2 GC parameters (temperature, column, etc.) may be changed to circumvent interferences.

3.6.3 A useful means of structure designation is GC/MS. It is recommended this procedure be used to confirm samples whenever possible.

3.6.4 The coated adsorbent usually contains a very small amount of residual formaldehyde derivative (Section 4.8).

3.7 *Calculations:*

3.7.1 Results are obtained by use of calibration curves. Calibration curves are prepared by plotting detector response against concentration for each standard. The best line through the data points is determined by curve fitting.

3.7.2 The concentration, in µg/mL, for a particular sample is determined by comparing its detector response to the calibration curve. If either of the analytes is found on the backup section, it is added to the amount found on the front section. Blank corrections should be performed before adding the results together.

3.7.3 The acrolein and/or formaldehyde air concentration can be expressed using the following equation:

$mg/m^3=(A)(B)/C$

where A=µg/mL from 3.7.2, B=desorption volume, and C=L of air sampled.

No desorption efficiency corrections are required.

3.7.4 The following equation can be used to convert results in mg/m^3 to ppm.

$ppm=(mg/m^3)(24.45)/MW$

where mg/m^3=result from 3.7.3, 24.45=molar volume of an ideal gas at 760 mm Hg and 25 °C, MW=molecular weight (30.0).

4. *Backup Data*

4.1 Backup data on detection limits, reliable quantitation limits, sensitivity and precision of the analytical method, breakthrough, desorption efficiency, storage, reproducibility, and generation of test atmospheres are available in OSHA Method 52, developed by the Organics Methods Evaluation Branch, OSHA Analytical Laboratory, Salt Lake City, Utah.

4.2 *Procedure to Coat XAD–2 Adsorbent with 2–HMP:*

4.2.1 *Apparatus:* Soxhlet extraction apparatus, rotary evaporation apparatus, vacuum dessicator, 1–L vacuum flask, 1–L round-bottomed evaporative flask, 1–L Erlenmeyer flask, 250-mL Buchner funnel with a coarse fritted disc, etc.

4.2.2 *Reagents:*

4.2.2.1 Methanol, isooctane, and toluene.

4.2.2.2 2-(Hydroxymethyl)piperidine.

4.2.2.3 Amberlite XAD–2 non-ionic polymeric adsorbent, 20 to 60 mesh, Aldrich Chemical XAD–2 was used in this evaluation.

4.2.3 *Procedure:* Weigh 125 g of crude XAD–2 adsorbent into a 1–L Erlenmeyer flask. Add about 200 mL of water to the flask and then swirl the mixture to wash the adsorbent. Discard any adsorbent that floats to the top of the water and then filter the mixture using a fritted Buchner funnel. Air dry the adsorbent for 2 minutes. Transfer the adsorbent back to the Erlenmeyer flask and then add about 200 mL of methanol to the flask. Swirl and then filter the mixture as before. Transfer the washed adsorbent back to the Erlenmeyer flask and then add about 200 mL of methanol to the flask. Swirl and then filter the mixture as before. Transfer the washed adsorbent to a 1–L round-bottomed evaporative flask, add 13 g of 2–HMP and then 200 mL of methanol, swirl the mixture and then allow it to stand for one hour. Remove the methanol at about 40 °C and reduced pressure using a rotary evaporation apparatus. Transfer the coated adsorbent to a suitable container and store it in a vacuum desiccator at room temperature overnight. Transfer the coated adsorbent to a Soxhlet extractor and then extract the material with toluene for about 24 hours. Discard the contaminated toluene, add methanol in its place and then continue the Soxhlet extraction for an additional 4 hours. Transfer the adsorbent to a weighted 1–L round-bottom evaporative flask and remove the methanol using the rotary evaporation apparatus. Determine the weight of the adsorbent and then add an amount of 2-HMP, which is 10% by weight of the adsorbent. Add 200 mL of methanol and then swirl the mixture. Allow the mixture to stand for one hour. Remove the methanol by rotary evaporation. Transfer the coated adsorbent to a suitable container and store it in a vacuum desiccator until all traces of solvents are gone. Typically, this will take 2–3 days. The coated adsorbent should be protected from contamination. XAD–2 adsorbent treated in this manner will probably not contain residual acrolein derivative. However, this adsorbent will often contain residual formaldehyde derivative levels of about 0.1 µg per 150 mg of adsorbent. If the blank values for a batch of coated adsorbent are too high, then the batch should be returned to the Soxhlet extractor, extracted with toluene again and then recoated. This process can be repeated until the desired blank levels are attained.

The coated adsorbent is now ready to be packed into sampling tubes. The sampling tubes should be stored in a sealed container to prevent contamination. Sampling tubes should be stored in the dark at room temperature. The sampling tubes should be segregated by coated adsorbent lot number. A sufficient amount of each lot number of coated adsorbent should be retained to prepare analytical standards for use with air samples from that lot number.

4.3 *A Procedure to Determine Formaldehyde by Acid Titration:* Standardize the 0.1 N HCl solution using sodium carbonate and methyl orange indicator.

Place 50 mL of 0.1 M sodium sulfite and three drops of thymophthalein indicator into a 250-mL Erlenmeyer flask. Titrate the contents of the flask to a colorless endpoint with 0.1 N HCl (usually one or two drops is sufficient). Transfer 10 mL of the formaldehyde/methanol solution (prepared in 3.3.1) into the same flask and titrate the mixture with 0.1 N HCl, again, to a colorless endpoint. The formaldehyde concentration of the standard may be calculated by the following equation:

$$\text{Formaldehyde, mg/mL} = \frac{\text{acid titer} \times \text{acid normality} \times 30.0}{\text{mL of sample}}$$

This method is based on the quantitative liberation of sodium hydroxide when formaldehyde reacts with sodium sulfite to form the formaldehyde-bisulfite addition product. The volume of sample may be varied depending on the formaldehyde content but the solution to be titrated must contain excess sodium sulfite. Formaldehyde solutions containing substantial amounts of acid or base must be neutralized before analysis.

Appendix C to § 1915.1048—Medical Surveillance—Formaldehyde

I. Health Hazards

The occupational health hazards of formaldehyde are primarily due to its toxic effects after inhalation, after direct contact with the skin or eyes by formaldehyde in liquid or vapor form, and after ingestion.

II. Toxicology

A. Acute Effects of Exposure

1. *Inhalation (breathing):* Formaldehyde is highly irritating to the upper airways. The concentration of formaldehyde that is immediately dangerous to life and health is 100 ppm. Concentrations above 50 ppm can cause severe pulmonary reactions within minutes. These include pulmonary edema, pneumonia, and bronchial irritation which can result in death. Concentrations above 5 ppm readily cause lower airway irritation characterized by cough, chest tightness and wheezing. There is some controversy regarding whether formaldehyde gas is a pulmonary sensitizer which can cause occupational asthma in a previously normal individual. Formaldehyde can produce symptoms of bronchial asthma in humans. The mechanism may be either sensitization of the individual by exposure to formaldehyde or direct irritation by formaldehyde in persons with pre-existing asthma. Upper airway irritation is the most common respiratory effect reported by workers and can occur over a wide range of concentrations, most frequently above 1 ppm. However, airway irritation has occurred in some workers with exposures to formaldehyde as low as 0.1 ppm. Symptoms of upper airway irritation include dry or sore throat, itching and burning sensations of the nose, and nasal congestion. Tolerance to this level of exposure may develop within 1–2 hours. This tolerance can permit workers remaining in an environment of gradually increasing formaldehyde concentrations to be unaware of their increasingly hazardous exposure.

2. *Eye contact:* Concentrations of formaldehyde between 0.05 ppm and 0.5 ppm produce a sensation of irritation in the eyes with burning, itching, redness, and tearing. Increased rate of blinking and eye closure generally protects the eye from damage at these low levels, but these protective mechanisms may interfere with some workers' work abilities. Tolerance can occur in workers continuously exposed to concentrations of formaldehyde in this range. Accidental splash injuries of human eyes to aqueous solutions of formaldehyde (formalin) have resulted in a wide range of ocular injuries including corneal opacities and blindness. The severity of the reactions have been directly dependent on the concentration of formaldehyde in solution and the amount of time lapsed before emergency and medical intervention.

3. *Skin contact:* Exposure to formaldehyde solutions can cause irritation of the skin and allergic contact dermatitis. These skin diseases and disorders can occur at levels well below those encountered by many formaldehyde workers. Symptoms include erythema, edema, and vesiculation or hives. Exposure to liquid formalin or formaldehyde vapor can provoke skin reactions in sensitized individuals even when airborne concentrations of formaldehyde are well below 1 ppm.

4. *Ingestion:* Ingestion of as little as 30 ml of a 37 percent solution of formaldehyde (formalin) can result in death. Gastrointestinal toxicity after ingestion is most severe in the stomach and results in symptoms which can include nausea, vomiting, and servere abdominal pain. Diverse damage to other organ systems including the liver, kidney, spleen, pancreas, brain, and central nervous systems can occur from the acute response to ingestion of formaldehyde.

B. Chronic Effects of Exposure

Long term exposure to formaldehyde has been shown to be associated with an increased risk of cancer of the nose and accessory sinuses, nasopharyngeal and oropharyngeal cancer, and lung cancer in humans. Animal experiments provide conclusive evidence of a causal relationship between nasal cancer in rats and formaldehyde exposure. Concordant

evidence of carcinogenicity includes DNA binding, genotoxicity in short-term tests, and cytotoxic changes in the cells of the target organ suggesting both preneoplastic changes and a dose-rate effect. Formaldehyde is a complete carcinogen and appears to exert an effect on at least two stages of the carcinogenic process.

III. Surveillance Considerations

A. History

1. *Medical and occupational history:* Along with its acute irritative effects, formaldehyde can cause allergic sensitization and cancer. One of the goals of the work history should be to elicit information on any prior or additional exposure to formaldehyde in either the occupational or the non-occupational setting.

2. *Respiratory history:* As noted above, formaldehyde has recognized properties as an airway irritant and has been reported by some authors as a cause of occupational asthma. In addition, formaldehyde has been associated with cancer of the entire respiratory system of humans. For these reasons, it is appropriate to include a comprehensive review of the respiratory system in the medical history. Components of this history might include questions regarding dyspnea on exertion, shortness of breath, chronic airway complaints, hyperreactive airway disease, rhinitis, bronchitis, bronchiolitis, asthma, emphysema, respiratory allergic reaction, or other preexisting pulmonary disease.

In addition, generalized airway hypersensitivity can result from exposures to a single sensitizing agent. The examiner should, therefore, elicit any prior history of exposure to pulmonary irritants, and any short- or long-term effects of that exposure.

Smoking is known to decrease mucociliary clearance of materials deposited during respiration in the nose and upper airways. This may increase a worker's exposure to inhaled materials such as formaldehyde vapor. In addition, smoking is a potential confounding factor in the investigation of any chronic respiratory disease, including cancer. For these reasons, a complete smoking history should be obtained.

3. *Skin Disorders:* Because of the dermal irritant and sensitizing effects of formaldehyde, a history of skin disorders should be obtained. Such a history might include the existence of skin irritation, previously documented skin sensitivity, and other dermatologic disorders. Previous exposure to formaldehyde and other dermal sensitizers should be recorded.

4. *History of atopic or allergic diseases:* Since formaldehyde can cause allergic sensitization of the skin and airways, it might be useful to identify individuals with prior allergen sensitization. A history of atopic disease and allergies to formaldehyde or any other substances should also be obtained. It is not definitely known at this time whether atopic diseases and allergies to formaldehyde or any other substances should also be obtained. Also it is not definitely known at this time whether atopic individuals have a greater propensity to develop formaldehyde sensitivity than the general population, but identification of these individuals may be useful for ongoing surveillance.

5. *Use of disease questionnaires:* Comparison of the results from previous years with present results provides the best method for detecting a general deterioration in health when toxic signs and symptoms are measured subjectively. In this way recall bias does not affect the results of the analysis. Consequently, OSHA has determined that the findings of the medical and work histories should be kept in a standardized form for comparison of the year-to-year results.

B. Physical Examination

1. *Mucosa of eyes and airways:* Because of the irritant effects of formaldehyde, the examining physician should be alert to evidence of this irritation. A speculum examination of the nasal mucosa may be helpful in assessing possible irritation and cytotoxic changes, as may be indirect inspection of the posterior pharynx by mirror.

2. *Pulmonary system:* A conventional respiratory examination, including inspection of the thorax and auscultation and percussion of the lung fields should be performed as part of the periodic medical examination. Although routine pulmonary function testing is only required by the standard once every year for persons who are exposed over the TWA concentration limit, these tests have an obvious value in investigating possible respiratory dysfunction and should be used wherever deemed appropriate by the physician. In cases of alleged formaldehyde-induced airway disease, other possible causes of pulmonary disfunction (including exposures to other substances) should be ruled out. A chest radiograph may be useful in these circumstances. In cases of suspected airway hypersensitivity or allergy, it may be appropriate to use bronchial challenge testing with formaldehyde or methacholine to determine the nature of the disorder. Such testing should be performed by or under the supervision of a physician experienced in the procedures involved.

3. *Skin:* The physician should be alert to evidence of dermal irritation of sensitization, including reddening and inflammation, urticaria, blistering, scaling, formation of skin fissures, or other symptoms. Since the integrity of the skin barrier is compromised by other dermal diseases, the presence of such disease should be noted. Skin sensitivity testing carries with it some risk of inducing sensitivity, and therefore, skin testing for formaldehyde sensitivity should not be used as a routine screening test. Sensitivity testing may be indicated in the investigation of a suspected existing sensitivity. Guidelines for such testing have been prepared by the North American Contact Dermatitis Group.

C. Additional Examinations or Tests

The physician may deem it necessary to perform other medical examinations or tests as indicated. The standard provides a mechanism whereby these additional investigations are covered under the standard for occupational exposure to formaldehyde.

D. Emergencies

The examination of workers exposed in an emergency should be directed at the organ systems most likely to be affected. Much of the content of the examination will be similar to the periodic examination unless the patient has received a severe acute exposure requiring immediate attention to prevent serious consequences. If a severe overexposure requiring medical intervention or hospitalization has occurred, the physician must be alert to the possibility of delayed symptoms. Followup nonroutine examinations may be necessary to assure the patient's well-being.

E. Employer Obligations

The employer is required to provide the physician with the following information: A copy of this standard and appendices A, C, D, and E; a description of the affected employee's duties as they relate to his or her exposure concentration; an estimate of the employee's exposure including duration (*e.g.* 15 hr/wk, three 8-hour shifts, full-time); a description of any personal protective equipment, including respirators, used by the employee; and the results of any previous medical determinations for the affected employee related to formaldehyde exposure to the extent that this information is within the employer's control.

F. Physician's Obligations

The standard requires the employer to obtain a written statement from the physician. This statement must contain the physician's opinion as to whether the employee has any medical condition which would place him or her at increased risk of impaired health from exposure to formaldehyde or use of respirators, as appropriate. The physician must also state his opinion regarding any restrictions that should be placed on the employee's exposure to formaldehyde or upon the use of protective clothing or equipment such as respirators. If the employee wears a respirator as a result of his or her exposure to formaldehyde, the physician's opinion must also contain a statement regarding the suitability of the employee to wear the type of respirator assigned. Finally, the physician must inform the employer that the employee has been told the results of the medica examination and of any medical conditions which require further explanation or treatment. This written opinion is not to contain any information on specific findings or diagnoses unrelated to occupational exposure to formaldehyde.

The purpose in requiring the examining physician to supply the employer with a written opinion is to provide the employer with a medical basis to assist the employer in placing employees initially, in assuring that their health is not being inpaired by formaldehyde, and to assess the employee's ability to use any required protective equipment.

Appendix D to § 1915.1048—Nonmandatory Medical Disease Questionnaire

A. Identification

Plant Name——————

Date——————

Employee Name——————

S.S. #——————

Job Title——————

Birthdate:——————

Age:——————

Sex:——————

Height:——————

Weight:——————

B. Medical History

1. Have you ever been in the hospital as a patient?
Yes ☐No ☐
If yes, what kind of problem were you having?——————

2. Have you ever had any kind of operation?
Yes ☐No ☐
If yes, what kind?——————

3. Do you take any kind of medicine regularly?
Yes ☐No ☐
If yes, what kind?——————

4. Are you allergic to any drugs, foods, or chemicals?
Yes ☐No ☐
If yes, what kind of allergy is it?——————

What causes the allergy?——————

5. Have you ever been told that you have asthma, hayfever, or sinusitis?
Yes ☐No ☐
6. Have you ever been told that you have emphysema, bronchitis, or any other respiratory problems?
Yes ☐No ☐
7. Have you ever been told you had hepatitis?
Yes ☐No ☐
8. Have you ever been told that you had cirrhosis?
Yes ☐No ☐
9. Have you ever been told that you had cancer?
Yes ☐No ☐
10. Have you ever had arthritis or joint pain?
Yes ☐No ☐
11. Have you ever been told that you had high blood pressure?
Yes ☐No ☐
12. Have you ever had a heart attack or heart trouble?
Yes ☐No ☐

B–1. Medical History Update

1. Have you been in the hospital as a patient any time within the past year?
Yes ☐No ☐
If so, for what condition?——————

2. Have you been under the care of a physician during the past year?
Yes ☐No ☐
If so, for what condition?——————

3. Is there any change in your breathing since last year?
Yes ☐No ☐
Better?——————
Worse?——————
No change?——————
If change, do you know why?——————

4. Is your general health different this year from last year?
Yes ☐No ☐
If different, in what way?——————

5. Have you in the past year or are you now taking any medication on a regular basis?
Yes ☐No ☐
Name Rx——————
Condition being treated——————

C. Occupational History

1. How long have you worked for your present employer?

2. What jobs have you held with this employer? Include job title and length of time in each job.

3. In each of these jobs, how many hours a day were you exposed to chemicals?

4. What chemicals have you worked with most of the time?

5. Have you ever noticed any type of skin rash you feel was related to your work?
Yes ☐No ☐
6. Have you ever noticed that any kind of chemical makes you cough?
Yes ☐No ☐
Wheeze?
Yes ☐No ☐
Become short of breath or cause your chest to become tight?
Yes ☐No ☐
7. Are you exposed to any dust or chemicals at home?
Yes ☐No ☐
If yes, explain:——————

8. In other jobs, have you ever had exposure to:
Wood dust?
Yes ☐No ☐
Nickel or chromium?
Yes ☐No ☐
Silica (foundry, sand blasting)?
Yes ☐No ☐
Arsenic or asbestos?
Yes ☐No ☐
Organic solvents?
Yes ☐No ☐
Urethane foams?
Yes ☐No ☐

C–1. Occupational History Update

1. Are you working on the same job this year as you were last year?
Yes ☐No ☐
If not, how has your job changed?——————

2. What chemicals are you exposed to on your job?

3. How many hours a day are you exposed to chemicals?

4. Have you noticed any skin rash within the past year you feel was related to your work?
Yes ☐No ☐
If so, explain circumstances: ——————

5. Have you noticed that any chemical makes you cough, be short of breath, or wheeze?
Yes ☐No ☐
If so, can you identify it?——————

D. Miscellaneous

1. Do you smoke?
Yes ☐No ☐
If so, how much and for how long?——————

Pipe——————

Cigars——————

Cigarettes——————

2. Do you drink alcohol in any form?
Yes ☐No ☐
If so, how much, how long, and how often?

3. Do you wear glasses or contact lenses?
Yes ☐No ☐
4. Do you get any physical exercise other than that required to do your job?
Yes ☐No ☐
If so, explain:——————

5. Do you have any hobbies or "side jobs" that require you to use chemicals, such as furniture stripping, sand blasting, insulation or manufacture of urethane foam, furniture, etc?
Yes ☐No ☐
If so, please describe, giving type of business or hobby, chemicals used and length of exposures.

E. Symptoms Questionnaire

1. Do you ever have any shortness of breath?
Yes ☐No ☐
If yes, do you have to rest after climbing several flights of stairs?
Yes ☐No ☐
If yes, if you walk on the level with people your own age, do you walk slower than they do?
Yes ☐No ☐
If yes, if you walk slower than a normal pace, do you have to limit the distance that you walk?
Yes ☐No ☐
If yes, do you have to stop and rest while bathing or dressing?
Yes ☐No ☐
2. Do you cough as much as three months out of the year?
Yes ☐No ☐
If yes, have you had this cough for more than two years?
Yes ☐No ☐
If yes, do you ever cough anything up from chest?
Yes ☐No ☐
3. Do you ever have a feeling of smothering, unable to take a deep breath, or tightness in your chest?
Yes ☐No ☐
If yes, do you notice that this on any particular day of the week?
Yes ☐No ☐
If yes, what day or the week?
Yes ☐No ☐
If yes, do you notice that this occurs at any particular place?
Yes ☐No ☐
If yes, do you notice that this is worse after you have returned to work after being off for several days?
Yes ☐No ☐
4. Have you ever noticed any wheezing in your chest?
Yes ☐No ☐
If yes, is this only with colds or other infections?
Yes ☐No ☐
Is this caused by exposure to any kind of dust or other material?
Yes ☐No ☐
If yes, what kind?_____
5. Have you noticed any burning, tearing, or redness of your eyes when you are at work?
Yes ☐No ☐
If so, explain circumstances:_____
_____
6. Have you noticed any sore or burning throat or itchy or burning nose when you are at work?
Yes ☐No ☐
If so, explain circumstances: _____
_____
7. Have you noticed any stuffiness or dryness of your nose?
Yes ☐No ☐
8. Do you ever have swelling of the eyelids or face?
Yes ☐No ☐
9. Have you ever been jaundiced?
Yes ☐No ☐
If yes, was this accompanied by any pain?
Yes ☐No ☐
10. Have you ever had a tendency to bruise easily or bleed excessively?
Yes ☐No ☐
11. Do you have frequent headaches that are not relieved by aspirin or tylenol?
Yes ☐No ☐
If yes, do they occur at any particular time of the day or week?
Yes ☐No ☐
If yes, when do they occur?_____
_____
12. Do you have frequent episodes of nervousness or irritability?
Yes ☐No ☐
13. Do you tend to have trouble concentrating or remembering?
Yes ☐No ☐
14. Do you ever feel dizzy, light-headed, excessively drowsy or like you have been drugged?
Yes ☐No ☐
15. Does your vision ever become blurred?
Yes ☐No ☐
16. Do you have numbness or tingling of the hands or feet or other parts of your body?
Yes ☐No ☐
17. Have you ever had chronic weakness or fatigue?
Yes ☐No ☐
18. Have you ever had any swelling of your feet or ankles to the point where you could not wear your shoes?
Yes ☐No ☐
19. Are you bothered by heartburn or indigestion?
Yes ☐No ☐
20. Do you ever have itching, dryness, or peeling and scaling of the hands?
Yes ☐No ☐
21. Do you ever have a burning sensation in the hands, or reddening of the skin?
Yes ☐No ☐
22. Do you ever have cracking or bleeding of the skin on your hands?
Yes ☐No ☐
23. Are you under a physician's care?
Yes ☐No ☐
If yes, for what are you being treated?_____
_____
24. Do you have any physical complaints today?
Yes ☐No ☐
If yes, explain?_____
_____
25. Do you have other health conditions not covered by these questions?
Yes ☐No ☐
If yes, explain: _____
_____

Appendix E to § 1915.1048—Qualitative and Quantitative Fit Testing Procedures

I. FIT Test Protocols

Because exposure to formaldehyde can affect the employee's ability to detect common odorants, fit test results from the isoamyl acetate test must be augmented by results from either the saccharin or irritant smoke test.

A. The employer shall include the following provisions in the fit test procedures. These provisions apply to both qualitative fit testing (QLFT) and quantitative fit testing (QNFT).

1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers. The selection shall include at least three sizes of elastomeric facepieces of the type of respirator that is to be tested, i.e., three sizes of half mask; or three sizes of full facepiece; and units from at least two manufacturers.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a comfortable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning the respirator. This instruction may not constitute the subject's formal training on respirator use, as it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each facepiece up to the face and eliminate those which obviously do not give a comfortable fit.

5. The more comfortable facepieces are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in item 6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

(a) position of the mask on the nose.
(b) room for eye protection.
(c) room to talk.
(d) position of mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

(a) chin properly placed;
(b) adequate strap tension, not overly tightened;
(c) fit across nose bridge;
(d) respirator of proper size to span distance from nose to chin;
(e) tendency of respirator to slip;
(f) self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct the negative and positive pressure fit checks as described below or ANSI Z88.2–1980. Before conducting the negative or positive pressure test, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another

facepiece shall be selected and retested if the test subject fails the fit check tests.

(a) *Positive pressure test.* Close off the exhalation valve and exhale gently onto the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

(b) *Negative pressure test.* Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, or long sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory disease or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

11. The test subject shall be given the opportunity to wear the successfully fitted respirator for a period of two weeks. If at any time during this period the respirator becomes uncomfortable, the test subject shall be given the opportunity to select a different facepiece and to be retested.

12. The employer shall certify that a successful fit test has been administered to the employee. The certification shall include the following information:

(a) Name of employee;

(b) Type, brand and size of respirator; and

(c) Date of test;

Where QNFT is used, the fit factor, strip chart, or other recording of the results of the test, shall be retained with the certification. The certification shall be maintained until the next fit test is administered.

13. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure.

The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

14. Test Exercises. The test subject shall perform exercises, in the test environment, in the manner described below:

(a) *Normal breathing.* In a normal standing position, without talking, the subject shall breathe normally.

(b) *Deep breathing.* In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as to not hyperventilate.

(c) *Turning head side to side.* Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

(d) *Moving head up and down.* Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(e) *Talking.* The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

(f) *Grimace.* The test subject shall grimace by smiling or frowning.

(g) *Bending over.* The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT units which prohibit bending at the waist.

(h) *Normal breathing.* Same as exercise 1.

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds.

The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become uncomfortable, another model of respirator shall be tried.

B. Qualitative Fit Test (QLFT) Protocols

1. *General.* (a) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator qualitative fit test program.

(b) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and assure that tese equipment is in proper working order.

(c) The employer shall assure the QLFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. *Isoamyl Acetate Protocol*—(a) *Odor threshold screening.* The odor threshold screening test, performed without wearing a respirator, is intended to determine if the individual tested can detect the odor of isoamyl acetate.

(1) Three 1-liter glass jars with metal lids are required.

(2) Odor free water (e.g., distilled or spring water) at approximately 25 degrees C shall be used for the solutions.

(3) The isoamyl acetate (IAA) (also known at isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1 liter jar and shaking for 30 seconds. A new solution shall be prepared at least weekly.

(4) The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but shall not be connected to the same recirculating ventilation system.

(5) The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor free water using a clear dropper or pipette. The solution shall be shaken for 30 seconds and allowed to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution shall be used for only one day.

(6) A test blank shall be prepared in a third jar by adding 500 cc of odor free water.

(7) The odor test and test blank jars shall be labeled 1 and 2 for jar identification. Labels shall be placed on the lids so they can be periodically peeled, dried off and switched to maintain the integrity of the test.

(8) The following instruction shall be typed on a card and placed on the table in front of the two jars (i.e., 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contain a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

(9) The mixtures used in the IAA ordor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

(10) If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test shall not be performed.

(11) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

(b) *Isoamyl acetate fit test.* (1) The fit test chamber shall be similar to a clear 55-gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches above the test subject's head. The inside top center of the chamber shall have a small hook attached.

(2) Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or masks shall be changed at least weekly.

(3) After selecting, donning, and properly adjusting a respirator, the test subject shall ware it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

(4) A copy of the test exercises and any prepared text from which the subject is to read shall be taped to the inside of the test chamber.

(5) Upon entering the test chamber, the test subject shall be given a 6-inch by 5-inch piece of paper towel, or other porous, absorbent, single-ply material, folded in half and wetted with 0.75 cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

(6) Allow two minutes for the IAA test concentration to stabilize before starting the fit test exercises. This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of his/her cooperation, and the purpose for the head exercises; or to demonstrate some of the exercises.

(7) If at any time during the test, the subject detects the banana like odor of IAA, the test

has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

(8) If the test has failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber and again begin the procedure described in (1) through (7) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

(9) When a respirator is found that passes the test, its efficiency shall be demonstrated for the subject by having the subject break the face seal and take a breath before exiting the chamber.

(10) When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the test area from becoming contaminated, the used towels shall be kept in a self sealing bag so there is no significant IAA concentration build-up in the test chamber during subsequent tests.

3. *Saccharin Solution Aerosol Protocol.* The saccharin solution aerosol QLFT protocol is the only currently available, validated test protocol for use with particulate disposable dust respirators not equipped with high-efficiency filters. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) *Taste threshold screening.* The saccharin taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of saccharin.

(1) Threshold screening as well as fit testing subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure shall have a ¾-inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his/her wide open mouth with tongue extended.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer the test conductor shall spray the *threshold check solution* into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The *threshold check solution* consists of 0.83 grams of sodium saccharin USP in 1 cc of warm water. It can be prepared by putting 1 cc of the fit test solution (see (b)(5) below) in 100 cc of distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then released and allowed to fully expand.

(7) Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the saccharin is not tasted after 30 squeezes (step 10), the test subject may not perform the saccharin fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

(b) *Saccharin solution aerosol fit test procedure.* (1) The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure described in (a) above.

(3) The test subject shall don the enclosure while wearing the respirator selected in section (a) above. The respirator shall be properly adjusted and equipped with a particular filter(s).

(4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(5) The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

(6) As before, the test subject shall breathe through the open mouth with tongue extended.

(7) The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure using the same number of squeezes required to elicit a taste response in the screening test.

(8) After generating the aerosol the test subject shall be instructed to perform the exercises in section I. A. 14 above.

(9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes as initially.

(10) The test subject shall indicate to the test conductor if any time during the fit test the taste of saccharin is detected.

(11) If the taste of saccharin is detected, the fit is deemed unsatisfactory and a different respirator shall be tried.

4. *Irritant Fume Protocol.* (a) The respirator to be tested shall be equipped with high-efficiency particulate air (HEPA) filters.

(b) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its characteristic odor.

(c) Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part No. 5645, or equivalent. Attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute.

(d) If a half-mask is being fitted, advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep his/her eyes closed while the test is performed.

(e) The test conductor shall direct the stream of irritant smoke from the smoke tube towards the face seal area of the test subject. He/She shall begin at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

(f) The exercises identified in section I. A. 14 above shall be performed by the test subject while the respirator seal is being challenged by the smoke.

(g) Each test subject passing the smoke test without evidence of a response shall be given a sensitivity check of the smoke from the same tube once the respirator has been removed to determine whether he/she reacts to the smoke. Failure to evoke a response shall void the fit test.

(h) The fit test shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agent.

C. Quantitative Fit Test (QNFT) Protocol

1. *General.* (a) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator quantitative fit test program.

(b) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and assure that test equipment is in proper working order.

(c) The employer shall assure that QNFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. *Definitions.* (a) Quantitative fit test. The test is performed in a test chamber. The normal air-purifying element of the respirator is replaced by a high-efficiency particulate air (HEPA) filter in the case of particulate QNFT aerosols or a sorbent offering contaminant penetration protection equivalent to high-efficiency filters where the QNFT test agency is a gas or vapor.

(b) Challenge agent means the aerosol, gas or vapor introduced into a test chamber so that its concentration inside and outside the respirator may be measured.

(c) Test subject means the person wearing the respirator for quantitative fit testing.

(d) Normal standing position means standing erect and straight with arms down along the sides and looking straight ahead.

(e) Maximum peak penetration method means the method of determing test agent penetration in the respirator as determined by strip chart recordings of the test. The highest peak penetration for a given exercise is taken to be representative of average penetration into the respirator for that exercise.

(f) Average peak penetration method means the method of determining test agent penetration into the respirator utilizing a

strip chart recorder, integrator, or computer. The agent penetration is determined by an average of the peak heights on the graph or by computer integration, for each exercise except the grimace exercise. Integrators or computers which calculate the actual test agent penetration into the respirator for each exercise will also be considered to meet the requirements of the average peak penetration method.

(g) "Fit Factor" means the ratio of challenge agent concentration outside with respect to the inside of a respirator inlet covering (facepiece or enclosure).

3. *Apparatus.* (a) Instrumentation. Aerosol generation, dilution, and measurement systems using corn oil or sodium chloride as test aerosols shall be used for quantitiative fit testing.

(b) Test chamber. The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without disturbing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air, yet uniform in concentration throughout the chamber.

(c) When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

(d) The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of the challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000. Integrators or computers which integrate the amount of test agent penetration leakage into the respirator for each exercise may be used provided a record of the readings is made.

(e) The combination of substitute air-purifying elements, challenge agent and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of an established exposure limit for the challenge agent at any time during the testing process.

(f) The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g., where the respirator is probed), a free air flow is allowed into the sampling line at all times and so that there is no interference with the fit or performance of the respirator.

(g) The test chamber and test set up shall permit the person administering the test to observe the test subject inside the chamber during the test.

(h) The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent inside the test chamber constant to within a 10 percent variation for the duration of the test.

(i) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event inside the test chamber and its being recorded.

(j) The sampling line tubing for the test chamber atmosphere and for the respirator sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.

(k) The exhaust flow from the test chamber shall pass through a high-effciency filter before release.

(l) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

(m) The limitations of instrument detection shall be taken into account when determining the fit factor.

(n) Test respirators shall be maintained in proper working order and inspected for deficiencies sush as cracks, missing valves and gaskets, etc.

4. *Procedural Requirements.* (a) When performing the initial positive or negative pressure test the sampling line shall be crimped closed in order to avoid air pressure leakage during either of these tests.

(b) An abbreviated screening isoamyl acetate test or irritant fume test may be utilized in order to quickly identify poor fitting respirators which passed the positive and/or negative pressure test and thus reduce the amount of QNFT time. When performing a screening isoamyl acetate test, combination high-efficiency organic vapor cartridges/canisters shall be used.

(c) A reasonably stable challenge agent concentration shall be measured in the test chamber prior to testing. For canopy or shower curtain type of test units the determination of the challenge agent stability may be established after the test subject has entered the test environment.

(d) Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half mask or 1 percent for a full facepiece respirator.

(e) A stable challenge concentration shall be obtained prior to the actual start of testing.

(f) Respirator restraining straps shall not be overtightened for testing. The straps shall be adjusted by the wearer without assistance from other persons to give a reasonable comfortable fit typical of normal use.

(g) The test shall be terminated whenever any single peak penetration exceeds 5 percent for half masks and 1 percent for full facepiece respirators. The test subject shall be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed inadequate.

(h) In order to successfully complete a QNFT, three successful fit tests are required. The results of each of the three independent fit tests must exceed the minimum fit factor needed for the class of respirator (e.g., half mask respirator, full facepiece respirator).

(i) Calculation of fit factors.

(1) The fit factor shall be determined for the quantitative fit test by taking the ratio of the average chamber concentration to the concentration inside the respirator.

(2) The average test chamber concentration is the arithmetic average of the test chamber concentration at the beginning and of the end of the test.

(3) The concentration of the challenge agent inside the respirator shall be determined by one of the following methods:

(i) Average peak concentration

(ii) Maximum peak concentration

(iii) Integration by calculation of the area under the individual peak for each exercise. This includes computerized integration.

(j) Interpretation of test results. The fit factor established by the quantitative fit testing shall be the lowest of the three fit factor values calculated from the three required fit tests.

(k) The test subject shall not be permitted to wear a half mask, or full facepiece respirator unless a minimum fit factor equivalent to at least 10 times the hazardous exposure level is obtained.

(l) Filters used for quantitative fit testing shall be replaced at least weekly, or whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily (when used) or sooner if there is any indication of breakthrough by a test agent.

§ 1915.1050 Methylenedianiline

(a) *Scope and application.* (1) This section applies to all occupational exposures to MDA, Chemical Abstracts Service Registry No. 101–77–9, except as provided in paragraphs (a)(2) through (a)(7)of this section.

(2) Except as provided in paragraphs (a)(8) and (e)(5) of this section, this section does not apply to the processing, use, and handling of products containing MDA where initial monitoring indicates that the product is not capable of releasing MDA in excess of the action level under the expected conditions of processing, use, and handling which will cause the greatest possible release; and where no "dermal exposure to MDA" can occur.

(3) Except as provided in paragraph (a)(8) of this section, this section does not apply to the processing, use, and handling of products containing MDA where objective data are reasonably relied upon which demonstrate the product is not capable of releasing MDA under the expected conditions of processing, use, and handling which will cause the greatest possible release; and where no "dermal exposure to MDA" can occur.

(4) This section does not apply to the storage, transportation, distribution or sale of MDA in intact containers sealed in such a manner as to contain the MDA dusts, vapors, or liquids, except for the provisions of § 1915.1200 of this part and paragraph (d) of this section.

(5) This section does not apply to the construction industry as defined in 29 CFR 1910.12(b). (Exposure to MDA in the construction industry is covered by 29 CFR 1926.60).

(6) Except as provided in paragraph (a)(8) of this secton, this section does not apply to materials in any form which contain less than 0.1% MDA by weight or volume.

(7) Except as provided in paragraph (a)(8) of this section, this section does

not apply to "finished articles containing MDA."

(8) Where products containing MDA are exempted under paragraphs (a)(2) through (a)(7) of this section, the employer shall maintain records of the initial monitoring results or objective data supporting that exemption and the basis for the employer's reliance on the data, as provided in the recordkeeping provision of paragraph (n) of this section.

(b) *Definitions.* For the purpose of this section, the following definitions shall apply:

Action level means a concentration of airborne MDA of 5 ppb as an eight (8)-hour time-weighted average.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees, for the purpose of exercising the right to observe monitoring and measuring procedures under paragraph (o) of this section, or any other person authorized by the Act or regulations issued under the Act.

Container means any barrel, bottle, can, cylinder, drum, reaction vessel, storage tank, commercial packaging or the like, but does not include piping systems.

Dermal exposure to MDA occurs where employees are engaged in the handling, application or use of mixtures or materials containing MDA, with any of the following non-airborne forms of MDA:

(i) Liquid, powdered, granular, or flaked mixtures containing MDA in concentrations greater than 0.1% by weight or volume; and

(ii) Materials other than "finished articles" containing MDA in concentrations greater than 0.1% by weight or volume.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which results in an unexpected and potentially hazardous release of MDA.

Employee exposure means exposure to MDA which would occur if the employee were not using respirators or protective work clothing and equipment.

Finished article containing MDA is defined as a manufactured item:

(i) Which is formed to a specific shape or design during manufacture;

(ii) Which has end use function(s) dependent in whole or part upon its shape or design during end use; and

(iii) Where applicable, is an item which is fully cured by virtue of having been subjected to the conditions (temperature, time) necessary to complete the desired chemical reaction.

4,4' Methylenedianiline or MDA means the chemical, 4,4'-diaminodiphenylmethane, Chemical Abstract Service Registry number 101-77-9, in the form of a vapor, liquid, or solid. The definition also includes the salts of MDA.

Regulated areas means areas where airborne concentrations of MDA exceed or can reasonably be expected to exceed, the permissible exposure limits, or where dermal exposure to MDA can occur.

STEL means short term exposure limit as determined by any 15 minute sample period.

(c) *Permissible exposure limits (PEL).* The employer shall assure that no employee is exposed to an airborne concentration of MDA in excess of ten parts per billion (10 ppb) as an 8-hour time-weighted average or a STEL of 100 ppb.

(d) *Emergency situations*—(1) *Written plan.* (i) A written plan for emergency situations shall be developed for each workplace where there is a possibility of an emergency. Appropriate portions of the plan shall be implemented in the event of an emergency.

(ii) The plan shall specifically provide that employees engaged in correcting emergency conditions shall be equipped with the appropriate personal protective equipment and clothing as required in paragraphs (h) and (i) of this section until the emergency is abated.

(iii) The plan shall specifically include provisions for alerting and evacuating affected employees as well as the elements prescribed in 29 CFR 1910.38, "Employee emergency plans and fire prevention plans."

(2) Alerting employees. Where there is the possibility of employee exposure to MDA due to an emergency, means shall be developed to alert promptly those employees who have the potential to be directly exposed. Affected employees not engaged in correcting emergency conditions shall be evacuated immediately in the event that an emergency occurs. Means shall also be developed and implemented for alerting other employees who may be exposed as a result of the emergency.

(e) *Exposure monitoring*—(1) *General.* (i) Determinations of employee exposure shall be made from breathing zone air samples that are representative of each employee's exposure to airborne MDA over an eight (8) hour period. Determination of employee exposure to the STEL shall be made from breathing zone air samples collected over a 15 minute sampling period.

(ii) Representative employee exposure shall be determined on the basis of one or more samples representing full shift exposure for each shift for each job classification in each work area where exposure to MDA may occur.

(iii) Where the employer can document that exposure levels are equivalent for similar operations in different work shifts, the employer shall only be required to determine representative employee exposure for that operation during one shift.

(2) *Initial monitoring.* Each employer who has a workplace or work operation covered by this standard shall perform initial monitoring to determine accurately the airborne concentrations of MDA to which employees may be exposed.

(3) *Periodic monitoring and monitoring frequency.* (i) If the monitoring required by paragraph (e)(2) of this section reveals employee exposure at or above the action level, but at or below the PELs, the employer shall repeat such representative monitoring for each such employee at least every six (6) months.

(ii) If the monitoring required by paragraph (e)(2) of this section reveals employee exposure above the PELs, the employer shall repeat such monitoring for each such employee at least every three (3) months.

(iii) The employer may alter the monitoring schedule from every 3 months to every 6 months for any employee for whom two consecutive measurements taken at least 7 days apart indicate that the employee exposure has decreased to below the TWA but above the action level.

(4) *Termination of monitoring.* (i) If the initial monitoring required by paragraph (e)(2) of this section reveals employee exposure to be below the action level, the employer may discontinue the monitoring for that employee, except as otherwise required by paragraph (e)(5) of this section.

(ii) If the periodic monitoring required by paragraph (e)(3) of this section reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level the employer may discontinue the monitoring for that employee, except as

otherwise required by paragraph (e)(5) of this section.

(5) *Additional monitoring.* The employer shall institute the exposure monitoring required under paragraphs (e)(2) and (e)(3) of this section when there has been a change in production process, chemicals present, control equipment, personnel, or work practices which may result in new or additional exposures to MDA, or when the employer has any reason to suspect a change which may result in new or additional exposures.

(6) *Accuracy of monitoring.* Monitoring shall be accurate, to a confidence level of 95 percent, to within plus or minus 25 percent for airborne concentrations of MDA.

(7) *Employee notification of monitoring results.* (i) The employer shall, within 15 working days after the receipt of the results of any monitoring performed under this standard, notify each employee of these results, in writing, either individually or by posting of results in an appropriate location that is accessible to affected employees.

(ii) The written notification required by paragraph (e)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce the employee exposure to or below the PELs, wherever the PELs are exceeded.

(8) *Visual monitoring.* The employer shall make routine inspections of employee hands, face and forearms potentially exposed to MDA. Other potential dermal exposures reported by the employee must be referred to the appropriate medical personnel for observation. If the employer determines that the employee has been exposed to MDA the employer shall:

(i) Determine the source of exposure;

(ii) Implement protective measures to correct the hazard; and

(iii) Maintain records of the corrective actions in accordance with paragraph (n) of this section.

(f) *Regulated areas*—(1) *Establishment*—(i) *Airborne exposures.* The employer shall establish regulated areas where airborne concentrations of MDA exceed or can reasonably be expected to exceed, the permissible exposure limits.

(ii) *Dermal exposures.* Where employees are subject to dermal exposure to MDA the employer shall establish those work areas as regulated areas.

(2) *Demarcation.* Regulated areas shall be demarcated from the rest of the workplace in a manner that minimizes the number of persons potentially exposed.

(3) *Access.* Access to regulated areas shall be limited to authorized persons.

(4) *Personal protective equipment and clothing.* Each person entering a regulated area shall be supplied with, and required to use, the appropriate personal protective clothing and equipment in accordance with paragraphs (h) and (i) of this section.

(5) *Prohibited activities.* The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum , or apply cosmetics in regulated areas.

(g) *Methods of compliance*—(1) *Engineering controls and work practices.* (i) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to MDA at or below the PELs except to the extent that the employer can establish that these controls are not feasible or where the provisions of paragraphs (g)(1)(ii) or (h)(1)(i) through (iv) of this section apply.

(ii) Wherever the feasible engineering controls and work practices which can be instituted are not sufficient to reduce employee exposure to or below the PELs, the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protective devices which comply with the requirements of paragraph (h) of this section.

(2) *Compliance program.* (i) The employer shall establish and implement a written program to reduce employee exposure to or below the PELs by means of engineering and work practice controls, as required by paragraph (g)(1) of this section, and by use of respiratory protection where permitted under this section. The program shall include a schedule for periodic maintenance (e.g., leak detection) and shall include the written plan for emergency situations as specified in paragraph (d) of this section.

(ii) Upon request this written program shall be furnished for examination and copying to the Assistant Secretary, the Director, affected employees, and designated employee representatives. The employer shall review and, as necessary, update such plans at least once every 12 months to make certain they reflect the current status of the program.

(3) *Employee rotation.* Employee rotation shall not be permitted as a means of reducing exposure.

(h) *Respiratory protection*—(1) *General.* The employer shall provide respirators, and ensure that they are used, where required by this section. Respirators shall be used in the following circumstances:

(i) During the time period necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations for which the employer establishes that engineering and work practice controls are not feasible;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PEL; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required or allowed under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1, and shall assure that the employee uses the respirator provided.

(ii) The employer shall select respirators from among those approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health under the provisions of 30 CFR part 11.

(iii) Any employee who cannot wear a negative pressure respirator shall be given the option of wearing a positive pressure respirator or any supplied-air respirator operated in the continuous flow or pressure demand mode.

(3) *Respirator program.* The employer shall institute a respiratory protection program in accordance with § 1910.134 (b), (d), (e), and (f) of this title.

(4) *Respirator use.* (i) Where air-purifying respirators (cartridge or canister) are used, the employer shall replace the air purifying element as needed to maintain the effectiveness of the respirator. The employer shall ensure that each cartridge is dated at the beginning of use.

(ii) Employees who wear respirators shall be allowed to leave the regulated area to readjust the facepiece or to wash their faces and to wipe clean the facepieces on their respirators in order to minimize potential skin irritation associated with respirator use.

TABLE 1—RESPIRATORY PROTECTION FOR MDA

Airborne Concentration of MDA or Condition of U	Respirator Type
a. Less than or equal to 10 x PEL.	(1) Half-Mask Respirator with HEPA[1] Cartridge[2]
b. Less than or equal to 50 x PEL.	(1) Full facepiece Respirator with HEPA[1] Cartridge or Canister[2]
c. Less than or equal to 1000 x PEL.	(1) Full facepiece powered air-purifying respirator with HEPA[1] cartridges[2]

TABLE 1—RESPIRATORY PROTECTION FOR MDA—Continued

Airborne Concentration of MDA or Condition of U	Respirator Type
d. Greater than 1000 x PEL or unknown concentrations.	(1) Self-contained breathing apparatus with full facepiece in positive pressure mode (2) Full facepiece positive pressure demand supplied-air respirator with auxiliary self-contained air supply
e. Escape	(1) Any full facepiece air-purifying respirator with HEPA[1] cartridges;[2] (2) Any positive pressure or continuous flow self-contained breathing apparatus with full facepiece or hood
f. Firefighting	(1) Full facepiece self-contained breathing apparatus in positive pressure demand mode.

Note: Respirators assigned for higher environmental concentrations may be used at lower concentrations.

[1] High Efficiency Particulate in Air filter (HEPA) means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers or larger.

[2] Combination HEPA/Organic Vapor Cartridges shall be used whenever MDA in liquid form or a process requiring heat is used.

(5) *Respirator fit testing.* (i) The employer shall perform and record the results of either quantitative or qualitative fit tests at the time of initial fitting and at least annually thereafter for each employee wearing a negative pressure respirator. The test shall be used to select a respirator facepiece which provides the required protection as prescribed in Table 1.

(ii) The employer shall follow the test protocols outlined in Appendix E of this standard for whichever type of fit testing the employer chooses.

(i) *Protective work clothing and equipment*—(1) *Provision and use.* Where employees are subject to dermal exposure to MDA, where liquids containing MDA can be splashed into the eyes, or where airborne concentrations of MDA are in excess of the PEL, the employer shall provide, at no cost to the employee, and ensure that the employee uses, appropriate protective work clothing and equipment which prevent contact with MDA such as, but not limited to:

(i) Aprons, coveralls or other full-body work clothing;

(ii) Gloves, head coverings, and foot coverings; and

(iii) Face shields, chemical goggles; or

(iv) Other appropriate protective equipment which comply with § 1910.133 of this title.

(2) *Removal and storage.* (i) The employer shall ensure that, at the end of their work shift, employees remove MDA-contaminated protective work clothing and equipment that is not routinely removed throughout the day in change rooms provided in accordance with the provisions established for change rooms.

(ii) The employer shall ensure that, during their work shift, employees remove all other MDA-contaminated protective work clothing or equipment before leaving a regulated area.

(iii) The employer shall ensure that no employee takes MDA-contaminated work clothing or equipment out of the change room, except those employees authorized to do so for the purpose of laundering, maintenance, or disposal.

(iv) MDA-contaminated work clothing or equipment shall be placed and stored in closed containers which prevent dispersion of the MDA outside the container.

(v) Containers of MDA-contaminated protective work clothing or equipment which are to be taken out of change rooms or the workplace for cleaning, maintenance, or disposal, shall bear labels warning of the hazards of MDA.

(3) *Cleaning and replacement.* (i) The employer shall provide the employee with clean protective clothing and equipment. The employer shall ensure that protective work clothing or equipment required by this paragraph is cleaned, laundered, repaired, or replaced at intervals appropriate to maintain its effectiveness.

(ii) The employer shall prohibit the removal of MDA from protective work clothing or equipment by blowing, shaking, or any methods which allow MDA to re-enter the workplace.

(iii) The employer shall ensure that laundering of MDA-contaminated clothing shall be done so as to prevent the release of MDA in the workplace.

(iv) Any employer who gives MDA-contaminated clothing to another person for laundering shall inform such person of the requirement to prevent the release of MDA.

(v) The employer shall inform any person who launders or cleans protective clothing or equipment contaminated with MDA of the potentially harmful effects of exposure.

(vi) MDA-contaminated clothing shall be transported in properly labeled, sealed, impermeable bags or containers.

(j) *Hygiene facilities and practices*—(1) *Change rooms.*

(i) The employer shall provide clean change rooms for employees, who must wear protective clothing, or who must use protective equipment because of their exposure to MDA.

(ii) Change rooms must be equipped with separate storage for protective clothing and equipment and for street clothes which prevents MDA contamination of street clothes.

(2) *Showers.* (i) The employer shall ensure that employees, who work in areas where there is the potential for exposure resulting from airborne MDA (e.g., particulates or vapors) above the action level, shower at the end of the work shift.

(A) Shower facilities required by this paragraph shall comply with § 1910.141(d)(3) of this title.

(B) The employer shall ensure that employees who are required to shower pursuant to the provisions contained herein do not leave the workplace wearing any protective clothing or equipment worn during the work shift.

(ii) Where dermal exposure to MDA occurs, the employer shall ensure that materials spilled or deposited on the skin are removed as soon as possible by methods which do not facilitate the dermal absorption of MDA.

(3) *Lunch facilities.* (i) Availability and construction. (A) Whenever food or beverages are consumed at the worksite and employees are exposed to MDA at or above the PEL or are subject to dermal exposure to MDA the employer shall provide readily accessible lunch areas.

(B) Lunch areas located within the workplace and in areas where there is the potential for airborne exposure to MDA at or above the PEL shall have a positive pressure, temperature controlled, filtered air supply.

(C) Lunch areas may not be located in areas within the workplace where the potential for dermal exposure to MDA exists.

(ii) The employer shall ensure that employees who have been subjected to dermal exposure to MDA or who have been exposed to MDA above the PEL wash their hands and faces with soap and water prior to eating, drinking, smoking, or applying cosmetics.

(iii) The employer shall ensure that employees exposed to MDA do not enter lunch facilities with MDA-contaminated protective work clothing or equipment.

(k) *Communication of hazards to employees*—(1) *Signs and labels.* (i) The employer shall post and maintain

legible signs demarcating regulated areas and entrances or accessways to regulated areas that bear the following legend:

DANGER
MDA
MAY CAUSE CANCER
LIVER TOXIN
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
MAY BE REQUIRED TO BE WORN IN THIS AREA

(ii) The employer shall ensure that labels or other appropriate forms of warning are provided for containers of MDA within the workplace. The labels shall comply with the requirements of 29 CFR 1915.1200(f) and shall include the following legend:

(A) For Pure MDA

DANGER
MDA
MAY CAUSE CANCER
LIVER TOXIN

(B) For mixtures containing MDA

DANGER
MDA
CONTAINS MATERIALS WHICH MAY CAUSE CANCER
LIVER TOXIN

(2) *Material safety data sheets (MSDS).* (i) Employers shall obtain or develop, and shall provide access to their employees, to a material safety data sheet (MSDS) for MDA. In meeting this obligation, employers shall make appropriate use of the information found in Appendices A and B.

(ii) Employers who are manufacturers or importers shall:

(A) Comply with paragraph (k)(1)(ii) of this section appropriate, and

(B) Comply with the requirement in OSHA's Hazard Communication standard, 29 CFR 1915.1200, that they deliver to downstream employers an MSDS for MDA.

(3) *Information and training.* (i) The employer shall provide employees with information and training on MDA, in accordance with 29 CFR 1915.1200(h), at the time of initial assignment and at least annually thereafter.

(ii) In addition to the information required under 29 CFR 1915.1200, the employer shall:

(A) Provide an explanation of the contents of this section, including appendices A and B, and indicate to employees where a copy of the standard is available;

(B) Describe the medical surveillance program required under paragraph (m) of this section, and explain the information contained in Appendix C; and

(C) Describe the medical removal provision required under paragraph (m) of this section.

(4) *Access to training materials.* (i) The employer shall make readily available to all affected employees, without cost, all written materials relating to the employee training program, including a copy of this regulation.

(ii) The employer shall provide to the Assistant Secretary and the Director, upon request, all information and training materials relating to the employee information and training program.

(l) *Housekeeping.* (1) All surfaces shall be maintained as free as practicable of visible accumulations of MDA.

(2) The employer shall institute a program for detecting MDA leaks, spills, and discharges, including regular visual inspections of operations involving liquid or solid MDA.

(3) All leaks shall be repaired and liquid or dust spills cleaned up promptly.

(4) Surfaces contaminated with MDA may not be cleaned by the use of compressed air.

(5) Shoveling, dry sweeping, and other methods of dry clean-up of MDA may be used where HEPA-filtered vacuuming and/or wet cleaning are not feasible or practical.

(6) Waste, scrap, debris, bags, containers, equipment, and clothing contaminated with MDA shall be collected and disposed of in a manner to prevent the re-entry of MDA into the workplace.

(m) *Medical surveillance*—(1) *General.* (i) The employer shall make available a medical surveillance program for employees exposed to MDA:

(A) Employees exposed at or above the action level for 30 or more days per year;

(B) Employees who are subject to dermal exposure to MDA for 15 or more days per year;

(C) Employees who have been exposed in an emergency situation;

(D) Employees whom the employer, based on results from compliance with paragraph (e)(8), has reason to believe are being dermally exposed; and

(E) Employees who show signs or symptoms of MDA exposure. (ii) The employer shall ensure that all medical examinations and procedures are performed by, or under the supervision of, a licensed physician, at a reasonable time and place, and provided without cost to the employee.

(2) *Initial examinations.* (i) Within 150 days of the effective date of this standard, or before the time of initial assignment, the employer shall provide each employee covered by paragraph (m)(1)(i) with a medical examination including the following elements:

(A) A detailed history which includes:

(*1*) Past work exposure to MDA or any other toxic substances;

(*2*) A history of drugs, alcohol, tobacco, and medication routinely taken (duration and quantity); and

(*3*) A history of dermatitis, chemical skin sensitization, or previous hepatic disease.

(B) A physical examination which includes all routine physical examination parameters, skin examination, and signs of liver disease.

(C) Laboratory tests including:

(*1*) Liver function tests and

(*2*) Urinalysis.

(D) Additional tests as necessary in the opinion of the physician.

(ii) No initial medical examination is required if adequate records show that the employee has been examined in accordance with the requirements of this section within the previous six months prior to the effective date of this standard or prior to the date of initial assignment.

(3) *Periodic examinations.* (i) The employer shall provide each employee covered by this section with a medical examination at least annually following the initial examination. These periodic examinations shall include at least the following elements:

(A) A brief history regarding any new exposure to potential liver toxins, changes in drug, tobacco, and alcohol intake, and the appearance of physical signs relating to the liver, and the skin;

(B) The appropriate tests and examinations including liver function tests and skin examinations; and

(C) Appropriate additional tests or examinations as deemed necessary by the physician.

(ii) If in the physicians' opinion the results of liver function tests indicate an abnormality, the employee shall be removed from further MDA exposure in accordance with paragraph (m)(9) of this section. Repeat liver function tests shall be conducted on advice of the physician.

(4) *Emergency examinations.* If the employer determines that the employee has been exposed to a potentially hazardous amount of MDA in an emergency situation as addressed in paragraph (d) of this section, the employer shall provide medical examinations in accordance with paragraphs (m)(3) (i) and (ii) of this section. If the results of liver function testing indicate an abnormality, the employee shall be removed in accordance with paragraph (m)(9) of this section. Repeat liver function tests shall be conducted on the advice of the

physician. If the results of the tests are normal, tests must be repeated two to three weeks from the initial testing. If the results of the second set of tests are normal and on the advice of the physician, no additional testing is required.

(5) *Additional examinations.* Where the employee develops signs and symptoms associated with exposure to MDA, the employer shall provide the employee with an additional medical examination including a liver function test. Repeat liver function tests shall be conducted on the advice of the physician. If the results of the tests are normal, tests must be repeated two to three weeks from the initial testing. If the results of the second set of tests are normal and, on the advice of the physician, no additional testing is required.

(6) *Multiple physician review mechanism.* (i) If the employer selects the initial physician who conducts any medical examination or consultation provided to an employee under this section, and the employee has signs or symptoms of occupational exposure to MDA (which could include an abnormal liver function test), and the employee disagrees with the opinion of the examining physician, and this opinion could affect the employee's job status, the employee may designate an appropriate, mutually acceptable second physician:

(A) To review any findings, determinations, or recommendations of the initial physician; and

(B) To conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate this review.

(ii) The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or consultation pursuant to this section. The employer may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within fifteen (15) days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:

(A) The employee informing the employer that he or she intends to seek a second medical opinion, and

(B) The employee initiating steps to make an appointment with a second physician.

(iii) If the findings, determinations, or recommendations of the second physician differ from those of the initial physician, then the employer and the employee shall assure that efforts are made for the two physicians to resolve any disagreement.

(iv) If the two physicians have been unable to resolve quickly their disagreement, then the employer and the employee through their respective physicians shall designate a third physician;

(A) To review any findings, determinations, or recommendations of the prior physicians; and

(B) To conduct such examinations, consultations, laboratory tests, and discussions with the prior physicians as the third physician deems necessary to resolve the disagreement of the prior physicians.

(v) The employer shall act consistent with the findings, determinations, and recommendations of the third physician, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.

(7) *Information provided to the examining and consulting physicians.* (i) The employer shall provide the following information to the examining physician:

(A) A copy of this regulation and its appendices;

(B) A description of the affected employee's duties as they relate to the employee's potential exposure to MDA;

(C) The employee's current actual or representative MDA exposure level;

(D) A description of any personal protective equipment used or to be used; and

(E) Information from previous employment-related medical examinations of the affected employee.

(ii) The employer shall provide the foregoing information to a second physician under this section upon request either by the second physician, or by the employee.

(8) Physician's written opinion. (i) For each examination under this section, the employer shall obtain, and provide the employee with a copy of, the examining physician's written opinion within 15 days of its receipt. The written opinion shall include the following:

(A) The occupationally pertinent results of the medical examination and tests;

(B) The physician's opinion concerning whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of health from exposure to MDA;

(C) The physician's recommended limitations upon the employee's exposure to MDA or upon the employee's use of protective clothing or equipment and respirators; and

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions resulting from MDA exposure which require further explanation or treatment.

(ii) The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposures.

(9) *Medical removal*—(i) *Temporary medical removal of an employee.* (A) Temporary removal resulting from occupational exposure. The employee shall be removed from work environments in which exposure to MDA is at or above the action level or where dermal exposure to MDA may occur, following an initial examination (paragraph (m)(2) of this section), periodic examinations (paragraph (m)(3) of this section), an emergency situation (paragraph (m)(4) of this section), or an additional examination (paragraph(m)(5) of this section) in the following circumstances:

(*1*) When the employee exhibits signs and/or symptoms indicative of acute exposure to MDA; or

(*2*) When the examining physician determines that an employee's abnormal liver function tests are not associated with MDA exposure but that the abnormalities may be exacerbated as a result of occupational exposure to MDA.

(B) Temporary removal due to a final medical determination.

(*1*) The employer shall remove an employee from work environments in which exposure to MDA is at or above the action level or where dermal exposure to MDA may occur, on each occasion that there is a final medical determination or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to MDA.

(*2*) For the purposes of this section, the phrase "final medical determination" shall mean the outcome of the physician review mechanism used pursuant to the medical surveillance provisions of this section.

(*3*) Where a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to MDA, the employer shall implement and act consistent with the recommendation.

(ii) *Return of the employee to former job status.* (A) The employer shall return an employee to his or her former job status:

(*1*) When the employee no longer shows signs or symptoms of exposure to

MDA, or upon the advice of the physician.

(2) When a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to MDA.

(B) For the purposes of this section, the requirement that an employer return an employee to his or her former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.

(iii) *Removal of other employee special protective measure or limitations.* The employer shall remove any limitations placed on an employee, or end any special protective measures provided to an employee, pursuant to a final medical determination, when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.

(iv) *Employer options pending a final medical determination.* Where the physician review mechanism used pursuant to the medical surveillance provisions of this section, has not yet resulted in a final medical determination with respect to an employee, the employer shall act as follows:

(A) *Removal.* The employer may remove the employee from exposure to MDA, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status.

(B) *Return.* The employer may return the employee to his or her former job status, and end any special protective measures provided to the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions.

(1) If the initial removal, special protection, or limitation of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician; or

(2) If the employee has been on removal status for the preceding six months as a result of exposure to MDA, then the employer shall await a final medical determination.

(v) *Medical removal protection benefits*—(A) *Provisions of medical removal protection benefits.* The employer shall provide to an employee up to six (6) months of medical removal protection benefits on each occasion that an employee is removed from exposure to MDA or otherwise limited pursuant to this section.

(B) *Definition of medical removal protection benefits.* For the purposes of this section, the requirement that an employer provide medical removal protection benefits means that the employer shall maintain the earnings, seniority, and other employment rights and benefits of an employee as though the employee had not been removed from normal exposure to MDA or otherwise limited.

(C) *Follow-up medical surveillance during the period of employee removal or limitations.* During the period of time that an employee is removed from normal exposure to MDA or otherwise limited, the employer may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this section.

(D) *Workers' compensation claims.* If a removed employee files a claim for workers' compensation payments for a MDA-related disability, then the employer shall continue to provide medical removal protection benefits pending disposition of the claim. To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by such amount. The employer shall receive no credit for workers' compensation payments received by the employee for treatment-related expenses.

(E) *Other credits.* The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives compensation for earnings lost during the period of removal either from a publicly or employer-funded compensation program, or receives income from non-MDA-related employment with any employer made possible by virtue of the employee's removal.

(F) *Employees who do not recover within the 6 months of removal.* The employer shall take the following measures with respect to any employee removed from exposure to MDA:

(1) The employer shall make available to the employee a medical examination pursuant to this section to obtain a final medical determination with respect to the employee;

(2) The employer shall assure that the final medical determination obtained indicates whether or not the employee may be returned to his or her former job status, and, if not, what steps should be1 taken to protect the employee's health;

(3) Where the final medical determination has not yet been obtained, or, once obtained indicates that the employee may not yet be returned to his or her former job status, the employer shall continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to his or her former job status; and

(4) Where the employer acts pursuant to a final medical determination which permits the return of the employee to his or her former job status, despite what would otherwise be an abnormal liver function test, later questions concerning removing the employee again shall be decided by a final medical determination. The employer need not automatically remove such an employee pursuant to the MDA removal criteria provided by this section.

(vi) *Voluntary removal or restriction of an employee.* Where an employer, although not required by this section to do so, removes an employee from exposure to MDA or otherwise places limitations on an employee due to the effects of MDA exposure on the employee's medical condition, the employer shall provide medical removal protection benefits to the employee equal to that required by paragraph (m)(9)(v) of this section.

(n) *Recordkeeping*—(1) *Monitoring data for exempted employers.* (i) Where as a result of the initial monitoring the processing, use, or handling of products made from or containing MDA are exempted from other requirements of this section under paragraph (a) (2) of this section, the employer shall establish and maintain an accurate record of monitoring relied on in support of the exemption.

(ii) This record shall include at least the following information:

(A) The product qualifying for exemption;

(B) The source of the monitoring data (e.g., was monitoring performed by the employer or a private contractor);

(C) The testing protocol, results of testing, and/or analysis of the material for the release of MDA;

(D) A description of the operation exempted and how the data support the exemption (e.g., are the monitoring data representative of the conditions at the affected facility); and

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) *Objective data for exempted employers.* (i) Where the processing, use, or handling of products made from or containing MDA are exempted from other requirements of this section under paragraph (a) of this section, the employer shall establish and maintain an accurate record of objective data relied upon in support of the exemption.

(ii) This record shall include at least the following information:

(A) The product qualifying for exemption;

(B) The source of the objective data;

(C) The testing protocol, results of testing, and/or analysis of the material for the release of MDA;

(D) A description of the operation exempted and how the data support the exemption; and

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(3) *Exposure measurements.* (i) The employer shall establish and maintain an accurate record of all measurements required by paragraph (e) of this section, in accordance with § 1915.1120 of this part.

(ii) This record shall include:

(A) The dates, number, duration, and results of each of the samples taken, including a description of the procedure used to determine representative employee exposures;

(B) Identification of the sampling and analytical methods used;

(C) A description of the type of respiratory protective devices worn, if any; and

(D) The name, social security number, job classification and exposure levels of the employee monitored and all other employees whose exposure the measurement is intended to represent.

(iii) The employer shall maintain this record for at least 30 years, in accordance with § 1915.1120 of this part.

(4) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance required by paragraph (m) of this section, in accordance with § 1915.1120 of this part.

(ii) This record shall include:

(A) The name, social security number and description of the duties of the employee;

(B) The employer's copy of the physician's written opinion on the initial, periodic, and any special examinations, including results of medical examination and all tests, opinions, and recommendations;

(C) Results of any airborne exposure monitoring done for that employee and the representative exposure levels supplied to the physician; and

(D) Any employee medical complaints related to exposure to MDA;

(iii) The employer shall keep, or assure that the examining physician keeps, the following medical records:

(A) A copy of this standard and its appendices, except that the employer may keep one copy of the standard and its appendices for all employees provided the employer references the standard and its appendices in the medical surveillance record of each employee;

(B) A copy of the information provided to the physician as required by any paragraphs in the regulatory text;

(C) A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to the information;

(D) A copy of the employee's medical and work history related to exposure to MDA; and

(iv) The employer shall maintain this record for at least the duration of employment plus 30 years, in accordance with 29 CFR 1915.1120 of this part.

(5) *Medical removals.* (i) The employer shall establish and maintain an accurate record for each employee removed from current exposure to MDA pursuant to paragraph (m) of this section.

(ii) Each record shall include:

(A) The name and social security number of the employee;

(B) The date of each occasion that the employee was removed from current exposure to MDA as well as the corresponding date on which the employee was returned to his or her former job status;

(C) A brief explanation of how each removal was or is being accomplished; and

(D) A statement with respect to each removal indicating the reason for the removal.

(iii) The employer shall maintain each medical removal record for at least the duration of an employee's employment plus 30 years.

(6) *Availability.* (i) The employer shall assure that records required to be maintained by this section shall be made available, upon request, to the Assistant Secretary and the Director for examination and copying.

(ii) Employee exposure monitoring records required by this section shall be provided upon request for examination and copying to employees, employee representatives, and the Assistant Secretary in accordance with 29 CFR 1915.1120 (a)-(e) and (g)-(i).

(iii) Employee medical records required by this section shall be provided upon request for examination and copying, to the subject employee, to anyone having the specific written consent of the subject employee, and to the Assistant Secretary in accordance with § 1915.1120 of this part.

(7) *Transfer of records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1915.1120(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least 90 days prior to disposal, and transmit the records to the Director if so requested by the Director within that period.

(o) *Observation of monitoring.* (1) Employee observation. The employer shall provide affected employees, or their designated representatives, an opportunity to observe the measuring or monitoring of employee exposure to MDA conducted pursuant to paragraph (e) of this section.

(2) *Observation procedures.* When observation of the measuring or monitoring of employee exposure to MDA requires entry into areas where the use of protective clothing and equipment or respirators is required, the employer shall provide the observer with personal protective clothing and equipment or respirators required to be worn by employees working in the area, assure the use of such clothing and equipment or respirators, and require the observer to comply with all other applicable safety and health procedures.

(p) *Effective date.* This standard shall become effective September 9, 1992.

(q) *Appendices.* The information contained in Appendices A, B, C and D to this section is not intended by itself, to create any additional obligations not otherwise imposed by this standard nor detract from any existing obligation. The protocols for respiratory fit testing in Appendix E are mandatory.

(r) *Startup dates.* All obligations of this standard commence on the effective date except as follows:

(1) Initial monitoring under paragraph (e) (2) of this section shall be completed as soon as possible but no later than December 8, 1992.

(2) Medical examinations under paragraph (m) of this section shall be completed as soon as possible but no later than February 8, 1993.

(3) Emergency plans required by paragraph (d) of this section shall be provided and available for inspection and copying as soon as possible but no later than January 7, 1993.

(4) Initial training and education shall be completed as soon as possible but no later than January 7, 1993.

(5) Hygiene and lunchroom facilities under paragraph (j) shall be in operation as soon as possible but no later than September 9, 1993.

(6) Respiratory protection required by paragraph (h) of this section shall be provided as soon as possible but no later than January 7, 1993.

(7) Written compliance plans required by paragraph (g) (2) of this section shall be completed and available for inspection and copying as soon as possible but no later than January 7, 1993.

(8) The permissible exposure limits in paragraph (c) of this section shall become effective January 7, 1993.

(9) Engineering controls needed to achieve the PELs must be in place September 9, 1993.

(10) Personal protective clothing required by paragraph (i) of this section shall be available January 7, 1993.

(Approved by the Office of Management and Budget under control number 1218-0184)

Appendix A to § 1915.1050—Substance Data Sheet for 4-4'-Methylenedianiline

I. Substance Identification

A. *Substance:* Methylenedianiline (MDA)

B. *Permissible exposure:*

1. *Airborne:* Ten parts per billion parts of air (10 ppb), time-weighted average (TWA) for an 8-hour workday and an action level of five parts per billion parts of air (5 ppb).

2. *Dermal:* Eye contact and skin contact with MDA are not permitted.

C. *Appearance and odor:* White to tan solid; amine odor

II. Health Hazard Data

A. *Ways in which MDA affects your health.* MDA can affect your health if you inhale it, or if it comes in contact with your skin or eyes. MDA is also harmful if you happen to swallow it. Do not get MDA in eyes, on skin, or on clothing.

B. *Effects of overexposure.* 1. *Short-term (acute) overexposure:* Overexposure to MDA may produce fever, chills, loss of appetite, vomiting, jaundice. Contact may irritate skin, eyes and mucous membranes. Sensitization may occur.

2. *Long-term (chronic) exposure.* Repeated or prolonged exposure to MDA, even at relatively low concentrations, may cause cancer. In addition, damage to the liver, kidneys, blood, and spleen may occur with long term exposure.

3. *Reporting signs and symptoms:* You should inform your employer if you develop any signs or symptoms which you suspect are caused by exposure to MDA including yellow staining of the skin.

III. Protective Clothing and Equipment

A. *Respirators.* Respirators are required for those operations in which engineering controls or work practice controls are not adequate or feasible to reduce exposure to the permissible limit. If respirators are worn, they must have the joint Mine Safety and Health Administration and National Institute for Occupational Safety and Health (NIOSH) seal of approval, and cartridges or canisters must be replaced as necessary to maintain the effectiveness of the respirator. If you experience difficulty breathing while wearing a respirator, you may request a positive pressure respirator from your employer. You must be thoroughly trained to use the assigned respirator, and the training will be provided by your employer.

MDA does not have a detectable odor except at levels well above the permissible exposure limits. Do not depend on odor to warn you when a respirator canister is exhausted. If you can smell MDA while wearing a respirator, proceed immediately to fresh air. If you experience difficulty breathing while wearing a respirator, tell your employer.

B. *Protective clothing.* You may be required to wear coveralls, aprons, gloves, face shields, or other appropriate protective clothing to prevent skin contact with MDA. Where protective clothing is required, your employer is required to provide clean garments to you, as necessary, to assure that the clothing protects you adequately. Replace or repair impervious clothing that has developed leaks.

MDA should never be allowed to remain on the skin. Clothing and shoes which are not impervious to MDA should not be allowed to become contaminated with MDA, and if they do, the clothing and shoes should be promptly removed and decontaminated. The clothing should be laundered to remove MDA or discarded. Once MDA penetrates shoes or other leather articles, they should not be worn again.

C. *Eye protection.* You must wear splashproof safety goggles in areas where liquid MDA may contact your eyes. Contact lenses should not be worn in areas where eye contact with MDA can occur. In addition, you must wear a face shield if your face could be splashed with MDA liquid.

IV. Emergency and First Aid Procedures.

A. *Eye and face exposure.* If MDA is splashed into the eyes, wash the eyes for at least 15 minutes. See a doctor as soon as possible.

B. *Skin exposure.* If MDA is spilled on your clothing or skin, remove the contaminated clothing and wash the exposed skin with large amounts of soap and water immediately. Wash contaminated clothing before you wear it again.

C. *Breathing.* If you or any other person breathes in large amounts of MDA, get the exposed person to fresh air at once. Apply artificial respiration if breathing has stopped. Call for medical assistance or a doctor as soon as possible. Never enter any vessel or confined space where the MDA concentration might be high without proper safety equipment and at least one other person present who will stay outside. A life line should be used.

D. *Swallowing.* If MDA has been swallowed and the patient is conscious, do not induce vomiting. Call for medical assistance or a doctor immediately.

V. Medical Requirements

If you are exposed to MDA at a concentration at or above the action level for more than 30 days per year, or exposed to liquid mixtures more than 15 days per year, your employer is required to provide a medical examination, including a medical history and laboratory tests, within 60 days of the effective date of this standard and annually thereafter. These tests shall be provided without cost to you. In addition, if you are accidentally exposed to MDA (either by ingestion, inhalation, or skin/eye contact) under conditions known or suspected to constitute toxic exposure to MDA, your employer is required to make special examinations and tests available to you.

VI. Observation of Monitoring

Your employer is required to perform measurements that are representative of your exposure to MDA and you or your designated representative are entitled to observe the monitoring procedure. You are entitled to observe the steps taken in the measurement procedure and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you and your representative must also be provided with, and must wear, the protective clothing and equipment.

VII. Access to Records

You or your representative are entitled to see the records of measurements of your exposure to MDA upon written request to your employer. Your medical examination records can be furnished to your physician or designated representative upon request by you to your employer.

VIII. Precautions for Safe Use, Handling and Storage

A. *Material is combustible.* Avoid strong acids and their anhydrides. Avoid strong oxidants. Consult supervisor for disposal requirements.

B. *Emergency clean-up.* Wear self-contained breathing apparatus and fully clothe the body in the appropriate personal protective clothing and equipment.

Appendix B to § 1915.1050—Substance Technical Guidelines, MDA

I. Identification

A. *Substance identification.*

1. *Synonyms*: CAS No. 101-77-9. 4,4'-methylenedianiline; 4,4'-methylenebisaniline; methylenedianiline; dianilinomethane.

2. *Formula*: $C_{13}H_{14N2}$

II. Physical Data

1. Appearance and Odor: White to tan solid; amine odor
2. Molecular Weight: 198.26
3. Boiling Point: 398–399° C at 760 mm Hg
4. Melting Point: 88–93° C (190–100° F)
5. Vapor Pressure: 9 mmHg at 232° C
6. Evaporation Rate (n-butyl acetate = 1): Negligible
7. Vapor Density (Air=1): Not Applicable
8. Volatile Fraction by Weight: Negligible
9. Specific Gravity (Water=1): Slight
10. Heat of Combustion: -8.40 kcal/g
11. Solubility in Water: Slightly soluble in cold water, very soluble in alcohol, benzene, ether, and many organic solvents.

III. Fire, Explosion, and Reactivity Hazard Data

1. Flash Point: 190° C (374° F) Setaflash closed cup
2. Flash Point: 226° C (439° F) Cleveland open cup
3. Extinguishing Media: Water spray; Dry Chemical; Carbon dioxide.
4. Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
5. Unusual Fire and Explosion Hazards: Fire or excessive heat may cause production of hazardous decomposition products.

IV. Reactivity Data

1. Stability: Stable
2. Incompatibility: Strong oxidizers
3. Hazardous Decomposition Products: As with any other organic material, combustion may produce carbon monoxide. Oxides of nitrogen may also be present.
4. Hazardous Polymerization: Will not occur.

V. Spill and Leak Procedures

1. Sweep material onto paper and place in fiber carton.
2. Package appropriately for safe feed to an incinerator or dissolve in compatible waste solvents prior to incineration.
3. Dispose of in an approved incinerator equipped with afterburner and scrubber or contract with licensed chemical waste disposal service.
4. Discharge treatment or disposal may be subject to federal, state, or local laws.
5. Wear appropriate personal protective equipment.

VI. Special Storage and Handling Precautions

A. High exposure to MDA can occur when transferring the substance from one container to another. Such operations should be well ventilated and good work practices must be established to avoid spills.

B. Pure MDA is a solid with a low vapor pressure. Grinding or heating operations increase the potential for exposure.

C. Store away from oxidizing materials.

D. Employers shall advise employees of all areas and operations where exposure to MDA could occur.

VII. Housekeeping and Hygiene Facilities

A. The workplace should be kept clean, orderly, and in a sanitary condition. The employer should institute a leak and spill detection program for operations involving MDA in order to detect sources of fugitive MDA emissions.

B. Adequate washing facilities with hot and cold water are to be provided and maintained in a sanitary condition. Suitable cleansing agents should also be provided to assure the effective removal of MDA from the skin.

VIII. Common Operations

Common operations in which exposure to MDA is likely to occur include the following: Manufacture of MDA; Manufacture of Methylene diisocyanate; Curing agent for epoxy resin structures; Wire coating operations; and filament winding.

Appendix C to § 1915.1050—Medical Surveillance Guidelines for MDA

I. Route of Entry

Inhalation; skin absorption; ingestion. MDA can be inhaled, absorbed through the skin, or ingested.

II. Toxicology

MDA is a suspect carcinogen in humans. There are several reports of liver disease in humans and animals resulting from acute exposure to MDA. A well documented case of an acute cardiomyopathy secondary to exposure to MDA is on record. Numerous human cases of hepatitis secondary to MDA are known. Upon direct contact MDA may also cause damage to the eyes. Dermatitis and skin sensitization have been observed. Almost all forms of acute environmental hepatic injury in humans involve the hepatic parenchyma and produce hepatocellular jaundice. This agent produces intrahepatic cholestasis. The clinical picture consists of cholestatic jaundice, preceded or accompanied by abdominal pain, fever, and chills. Onset in about 60% of all observed cases is abrupt with severe abdominal pain. In about 30% of observed cases, the illness presented and evolved more slowly and less dramatically, with only slight abdominal pain. In about 10% of the cases only jaundice was evident. The cholestatic nature of the jaundice is evident in the prominence of itching, the histologic predominance of bile stasis, and portal inflammatory infiltration, accompanied by only slight parenchymal injury in most cases, and by the moderately elevated transaminase values. Acute, high doses, however, have been known to cause hepatocellular damage resulting in elevated SGPT, SGOT, alkaline phosphatase and bilirubin.

Absorption through the skin is rapid. MDA is metabolized and excreted over a 48-hour period. Direct contact may be irritating to the skin, causing dermatitis. Also MDA which is deposited on the skin is not thoroughly removed through washing.

MDA may cause bladder cancer in humans. Animal data supporting this assumption is not available nor is conclusive human data. However, human data collected on workers at a helicopter manufacturing facility where MDA is used suggests a higher incidence of bladder cancer among exposed workers.

III. Signs and Symptoms

Skin may become yellow from contact with MDA.

Repeated or prolonged contact with MDA may result in recurring dermatitis (red-itchy, cracked skin) and eye irritation. Inhalation, ingestion or absorption through the skin at high concentrations may result in hepatitis, causing symptoms such as fever and chills, nausea and vomiting, dark urine, anorexia, rash, right upper quadrant pain and jaundice. Corneal burns may occur when MDA is splashed in the eyes.

IV. Treatment of Acute Toxic Effects/ Emergency Situation

If MDA gets into the eyes, immediately wash eyes with large amounts of water. If MDA is splashed on the skin, immediately wash contaminated skin with mild soap or detergent. Employee should be removed from exposure and given proper medical treatment. Medical tests required under the emergency section of the medical surveillance section(m)(4) must be conducted.

If the chemical is swallowed do not induce vomiting but remove by gastric lavage.

Appendix D to § 1915.1050—Sampling and Analytical Methods for MDA Monitoring and Measurement Procedures

Measurements taken for the purpose of determining employee exposure to MDA are best taken so that the representative average 8-hour exposure may be determined from a single 8-hour sample or two (2) 4-hour samples. Short-time interval samples (or grab samples) may also be used to determine average exposure level if a minimum of five measurements are taken in a random manner over the 8-hour work shift. Random sampling means that any portion of the work shift has the same chance of being sampled as any other. The arithmetic average of all such random samples taken on one work shift is an estimate of an employee's average level of exposure for that work shift. Air samples should be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee).

There are a number of methods available for monitoring employee exposures to MDA. The method OSHA currently uses is included below.

The employer, however, has the obligation of selecting any monitoring method which meets the accuracy and precision requirements of the standard under his unique field conditions. The standard requires that the method of monitoring must have an accuracy, to a 95 percent confidence level, of not less than plus or minus 25 percent for the select PEL.

OSHA Methodology

Sampling Procedure

Apparatus

Samples are collected by use of a personal sampling pump that can be calibrated within ±5% of the recommended flow rate with the sampling filter in line.

Samples are collected on 37 mm Gelman type A/E glass fiber filters treated with sulfuric acid. The filters are prepared by soaking each filter with 0.5 mL of 0.26N H_2SO_4. (0.26 N H_2SO_4 can be prepared by diluting 1.5 mL of 36N H(2)S0(4) to 200 mL with deionized water.) The filters are dried in an oven at 100° C for one hour and then assembled into two-piece 37 mm polystyrene cassettes with backup pads. The cassettes are sealed with shrink bands and the ends are plugged with plastic plugs.

After sampling, the filters are carefully removed from the cassettes and individually transferred to small vials containing approximately 2 mL deionized water. The vials must be tightly sealed. The water can be added before or after the filters are transferred. The vials must be sealable and capable of holding at least 7 mL of liquid. Small glass scintillation vials with caps containing Teflon liners are recommended.

Reagents

Deionized water is needed for addition to the vials.

Sampling technique

Immediately before sampling, remove the plastic plugs from the filter cassettes.

Attach the cassette to the sampling pump with flexible tubing and place the cassette in the employee's breathing zone.

After sampling, seal the cassettes with plastic plugs until the filters are transferred to the vials containing deionized water.

At some convenient time within 10 hours of sampling, transfer the sample filters to vials.

Seal the small vials lengthwise.

Submit at least one blank filter with each sample set. Blanks should be handled in the same manner as samples, but no air is drawn through them.

Record sample volumes (in L of air) for each sample, along with any potential interferences.

Retention efficiency

A retention efficiency study was performed by drawing 100 L of air (80% relative humidity) at 1 L/min through sample filters that had been spiked with 0.814 µg MDA. Instead of using backup pads, blank acid-treated filters were used as backups in each cassette. Upon analysis, the top filters were found to have an average of 91.8% of the spiked amount. There was no MDA found on the bottom filters, so the amount lost was probably due to the slight instability of the MDA salt.

Extraction efficiency

The average extraction efficiency for six filters spiked at the target concentration is 99.6%.

The stability of extracted and derivatized samples was verified by reanalyzing the above six samples the next day using fresh standards. The average extraction efficiency for the reanalyzed samples is 98.7%.

Recommended air volume and sampling rate

The recommended air volume is 100 L.

The recommended sampling rate is 1 L/min.

Interferences (sampling)

MDI appears to be a positive interference. It was found that when MDI was spiked onto an acid-treated filter, the MDI converted to MDA after air was drawn through it.

Suspected interferences should be reported to the laboratory with submitted samples.

Safety precautions (sampling)

Attach the sampling equipment to the employees so that it will not interfere with work performance or safety.

Follow all safety procedures that apply to the work area being sampled.

Analytical Procedure

Apparatus: The following are required for analysis.

A GC equipped with an electron capture detector. For this evaluation a Tracor 222 Gas Chromatograph equipped with a Nickel 63 High Temperature Electron Capture Detector and a Linearizer was used.

A GC column capable of separating the MDA derivative from the solvent and interferences. A 6 ft X 2 mm ID glass column packed with 3% OV-101 coated on 100/120 Gas Chrom Q was used in this evaluation.

A electronic integrator or some other suitable means of measuring peak areas or heights.

Small resealable vials with Teflon-lined caps capable of holding 4 mL.

A dispenser or pipet for toluene capable of delivering 2.0 mL.

Pipets (or repipets with plastic or Teflon tips) capable of delivering 1 mL for the sodium hydroxide and buffer solutions.

A repipet capable of delivering 25 µL HFAA.

Syringes for preparation of standards and injection of standards and samples into a GC.

Volumetric flasks and pipets to dilute the pure MDA in preparation of standards.

Disposable pipets to transfer the toluene layers after the samples are extracted.

Reagents

0.5 NaOH prepared from reagent grade NaOH.

Toluene, pesticide grade. Burdick and Jackson distilled in glass toluene was used.

Heptafluorobutyric acid anhydride (HFAA). HFAA from Pierce Chemical Company was used.

pH 7.0 phosphate buffer, prepared from 136 g potassium dihydrogen phosphate and 1 L deionized water. The pH is adjusted to 7.0 with saturated sodium hydroxide solution.

4,4'-Methylenedianiline (MDA), reagent grade.

Standard Preparation

Concentrated stock standards are prepared by diluting pure MDA with toluene. Analytical standards are prepared by injecting uL amounts of diluted stock standards into vials that contain 2.0 mL toluene.

25 µL HFAA are added to each vial and the vials are capped and shaken for 10 seconds.

After 10 min, 1 mL of buffer is added to each vial.

The vials are recapped and shaken for 10 seconds.

After allowing the layers to separate, aliquots of the toluene (upper) layers are removed with a syringe and analyzed by GC.

Analytical standard concentrations should bracket sample concentrations. Thus, if samples fall out of the range of prepared standards, additional standards must be prepared to ascertain detector response.

Sample preparation

The sample filters are received in vials containing deionized water.

1 mL of 0.5N NaOH and 2.0 mL toluene are added to each vial.

The vials are recapped and shaken for 10 min.

After allowing the layers to separate, approximately 1 mL aliquots of the toluene (upper) layers are transferred to separate vials with clean disposable pipets.

The toluene layers are treated and analyzed.

Analysis

GC conditions

Zone temperatures:
Column—220° C
Injector—235° C
Detector—335° C

Gas flows, Ar/CH4 Column - 28 mL/min (95/5)
Purge—40 mL/min

Injection volume: 5.0 µL

Column: 6 ft X 1/8 in ID glass, 3% OV-101 on 100/120 Gas Chrom Q

Retention time of MDA derivative: 3.5 min

Chromatogram:

Peak areas or heights are measured by an integrator or other suitable means.

A calibration curve is constructed by plotting response (peak areas or heights) of standard injections versus µg of MDA per sample. Sample concentrations must be bracketed by standards.

Interferences (analytical)

Any compound that gives an electron capture detector response and has the same general retention time as the HFAA derivative of MDA is a potential interference. Suspected interferences reported to the laboratory with submitted samples by the industrial hygienist must be considered before samples are derivatized.

GC parameters may be changed to possibly circumvent interferences.

Retention time on a single column is not considered proof of chemical identity. Analyte identity should be confirmed by GC/MS if possible.

Calculations

The analyte concentration for samples is obtained from the calibration curve in terms of µg MDA per sample. The extraction efficiency is 100%. If any MDA is found on the blank, that amount is subtracted from the sample amounts. The air concentrations are calculated using the following formulae.

ug/m(3) = (µg MDA per sample) (1000)/(L of air sampled)

ppb = (ug/m(3))(24.46)/(198.3) = (ug/m(3))(0.1233)

where 24.46 is the molar volume at 25° C and 760 mm Hg

Safety Precautions (analytical)

Avoid skin contact and inhalation of all chemicals.

Restrict the use of all chemicals to a fume hood if possible.

Wear safety glasses and a lab coat at all times while in the lab area.

Appendix E to § 1915.1050—Qualitative and Quantitative Fit Testing Procedures

Qualitative Fit Test Protocols

I. Isoamyl Acetate (banana oil) Protocol

A. *Odor threshold screening.*

1. Three 1-liter glass jars with metal lids (e.g. Mason or Bell jars) are required.

2. Odor-free water (e.g. distilled or spring water) at approximately 25 deg. C shall be used for the solutions.

3. The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1-liter jar and shaking for 30 seconds. This solution shall be prepared new at least weekly.

4. The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated so that circulation of the test solution does not occur and cross contaminate the testing different sites.

5. The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor free water using a clean dropper or pipette. Shake for 30 seconds and allow to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution may be used for only one day.

6. A test blank is prepared in a third jar by adding 500 cc of odor free water.

7. The odor test and test blank jars shall be labelled 1 and 2 for jar identification.

8. The following instructions shall be typed on a card and placed on the table in front of the two test jars (i.e. 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

9. The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

10. If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test may not be used.

11. If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

B. *Respirator Selection*

1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers. The selection shall include at least three sizes of elastomeric half facepieces, from at least two manufacturers.

2. The selection process shall be conducted in a room separate from the fit-test chamber to prevent odor fatigue. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a "comfortable" respirator. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, as it is only a review.

3. The test subject should understand that the employee is being asked to select the respirator which provides the most comfortable fit.

4. The test subject holds each facepiece up to the face and eliminates those which obviously do not give a comfortable fit. Normally, selection will begin with a half-mask and if a comfortable fit cannot be found, the subject will be asked to test the full facepiece respirators. (A small percentage of users will not be able to wear any half-mask.)

5. The more comfortable facepieces are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. All donning and adjustments of the facepiece shall be performed by the test subject without assistance from the test conductor or other person. Assistance in assessing comfort can be given by discussing the points in 6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator after donning:

- Positioning of mask on nose.
- Room for eye protection.
- Room to talk.
- Positioning mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed.
- Strap tension.
- Fit across nose bridge.
- Distance from nose to chin.
- Tendency to slip.
- Self-observation in mirror.

8. The test subject shall perform the conventional negative or positive-pressure fit checks (e.g., see ANSI Z88.2-1980A7). Before beginning the negative- or positive-pressure test, the subject shall be told to "seat" the mask by rapidly moving the head from side-to-side and up and down, while taking a few deep breaths.

9. The test subject is now ready for fit testing.

10. After passing the fit test, the test subject shall be questioned again regarding the comfort of the respirator. If the respirator has become uncomfortable, another model of respirator shall be tried.

11. The employee shall be given the opportunity to select a different facepiece and to be retested if the chosen facepiece becomes increasingly uncomfortable at any time.

C. *Fit Test*

1. The fit test chamber shall be similar to a clear 55 gallon drum liner suspended inverted over a 2-foot diameter frame, so that the top of chamber is about 6 inches above the test subject's head. The inside top center of the chamber shall have a small hook attached.

2. Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or canisters shall be replaced as necessary to maintain the effectiveness of the respirator.

3. After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

4. A copy of the following test exercises and Rainbow Passage shall be taped to the inside of the test chamber:

Test Exercises

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are deep and regular.

iii. Turn head all the way from one side to the other. Inhale on each side. Be certain movement is complete. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Inhale when head is in the full up position (looking toward ceiling). Be certain motions are complete and made about every second. Do not bump the respirator on the chest.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it aloud will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

vi. Jog in place.

vii. Breathe normally.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

5. Each test subject shall wear the respirator for at a least 10 minutes before starting the fit test.

6. Upon entering the test chamber, the test subject shall be given a 6 inch by 5 inch piece of paper towel or other porous absorbent single ply material, folded in half and wetted with three-quarters of one cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

7. Allow two minutes for the IAA test concentration to be reached before starting the fit-test exercises.

8. Each exercise described in #4 above shall be performed for at least one minute.

9. If at any time during the test, the subject detects the banana-like odor of IAA, the test has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

10. If the test is failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber, and again begin the procedure described in the c(4) through c(8) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

11. If a person cannot pass the fit test described above wearing a half-mask respirator from the available selection, full facepiece models must be used.

12. When a respirator is found that passes the test, the subject must break the faceseal and take a breath before exiting the chamber. This is to assure that the reason the test subject is not smelling the IAA is the good fit of the respirator facepiece seal and not olfactory fatigue.

13. When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the area from becoming contaminated, the used towels shall be kept in a self-sealing bag so there is no significant IAA concentration buildup in the test chamber during subsequent tests.

14. Persons who have successfully passed this fit test with a half-mask respirator may be assigned the use of the test respirator in atmospheres with up to 10 times the PEL. In atmospheres greater than 10 times, and less than 50 times the PEL (up to 50 ppm), the subject must pass the IAA test using a full face negative pressure respirator. (The concentration of the IAA inside the test chamber must be increased by five times for QLFT of the full facepiece.)

15. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

16. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as a powered air-purifying respirator, supplied air respirator, or self-contained breathing apparatus.

17. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respiratory diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

18. Qualitative fit testing shall be repeated at least every 12 months.

19. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. *Recordkeeping*

A summary of all test results shall be maintained by the employer for 3 years. The summary shall include:

(1) Name of test subject

(2) Date of testing.

(3) Name of the test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

II. Saccharin Solution Aerosol Protocol

A. *Respirator Selection.*

Respirators shall be selected as described in section IB (respirator selection) above, except that each respirator shall be equipped with a particulate filter.

B. *Taste Threshold Screening.*

1. An enclosure placed over the head and shoulders shall be used for threshold screening (to determine if the individual can taste saccharin) and for fit testing. The enclosure shall be approximately 12 inches in diameter by 14 inches tall with at least the front clear to allow free movement of the head when a respirator is worn.

2. The test enclosure shall have a three-quarter inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

3. The entire screening and testing procedure shall be explained to the test subject prior to conducting the screening test.

4. During the threshold screening test, the test subject shall don the test enclosure and breathe with open mouth with tongue extended.

5. Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the threshold check solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

6. The threshold check solution consists of 0.83 grams of sodium saccharin, USP in water. It can be prepared by putting 1 cc of the test solution (see C 7 below) in 100 cc of water.

7. To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then is released and allowed to fully expand.

8. Ten squeezes of the nebulizer bulb are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

9. If the first response is negative, ten more squeezes of the nebulizer bulb are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

10. If the second response is negative ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin can be tasted.

11. The test conductor will take note of the number of squeezes required to elicit a taste response.

12. If the saccharin is not tasted after 30 squeezes (Step 10), the saccharin fit test cannot be performed on the test subject.

13. If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

14. Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

15. The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least every four hours.

C. *Fit Test*

1. The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

2. The test subject shall don and adjust the respirator without assistance from any person.

3. The fit test uses the same enclosure described in IIB above.

4. Each test subject shall wear the respirator for a least 10 minutes before starting the fit test.

(a) This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of cooperation and, the purpose for the head exercises; or to demonstrate some of the exercises.

(b) The test subject shall perform the conventional negative or positive pressure fit tests (See ANSI Z88.2–1980 A7).

5. The test subject shall enter the enclosure while wearing the respirator selected in section IB above. This respirator shall be properly adjusted and equipped with a particulate filter.

6. A second DeVilbiss Model 40 Inhalation Medication Nebulizer is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

7. The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

8. As before, the test subject shall breathe with mouth open and tongue extended.

9. The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure using the same technique as for the taste threshold screening and the same number of squeezes required to elicit a taste response in the screening. (See B8 through B10 above).

10. After generation of the aerosol read the following instructions to the test subject. The test subject shall perform the exercises for one minute each.

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are deep and regular.

iii. Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Be certain motions are complete. Inhale when head is in the full up position (when looking toward the ceiling). Do not bump the respirator on the chest.

v. Talk. Talk aloud and slowly. The following paragraph is called the Rainbow

Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement.

vi. Jog in place.

vii. Breathe normally.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of along round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

11. At the beginning of each exercise, the aerosol concentration shall be replenished using one-half the number of squeezes as initially described in C9.

12. The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected.

13. If the saccharin is detected the fit is deemed unsatisfactory and a different respirator shall be tried.

14. Successful completion of the test protocol shall allow the use of the half mask tested respirator in contaminated atmospheres up to 10 times the PEL of MDA. In other words this protocol may not be used to assign protection factors higher than ten.

15. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

16. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

17. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

18. Qualitative fit testing shall be repeated at least every 12 months.

19. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

D. *Recordkeeping*

A summary of all test results shall be maintained by the employer for 3 years. The summary shall include:

(1) Name of test subject

(2) Date of testing.

(3) Name of test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

III. Irritant Fume Protocol.

A. *Respirator selection.*

Respirators shall be selected as described in section IB above, except that each respirator shall be equipped with a combination of high-efficiency and acid-gas cartridges.

B. *Fit test.*

1. The test subject shall be allowed to smell a weak concentration of the irritant smoke to familiarize the subject with the characteristic odor.

2. The test subject shall properly don the respirator selected as above, and wear it for at least 10 minutes before starting the fit test.

3. The test conductor shall review this protocol with the test subject before testing.

4. The test subject shall perform the conventional positive pressure and negative pressure fit checks (see ANSI Z88.2 1980). Failure of either check shall be cause to select an alternate respirator.

5. Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part 15645, or equivalent. Attach a short length of tubing to one end of the smoke tube. Attach the other end of the smoke tube to a low pressure air pump set to deliver 200 milliliters per minute.

6. Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep the eyes closed while the test is performed.

7. The test conductor shall direct the stream of irritant smoke from the tube towards the faceseal area of the test subject. The person conducting the test shall begin with the tube at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

8. The test subject shall be instructed to do the following exercises while the respirator is being challenged by the smoke. Each exercise shall be performed for one minute.

i. Breathe normally.

ii. Breathe deeply. Be certain breaths are deep and regular.

iii. Turn head all the way from one side to the other. Be certain movement is complete. Inhale on each side. Do not bump the respirator against the shoulders.

iv. Nod head up-and-down. Be certain motions are complete and made every second. Inhale when head is in the full up position (looking toward ceiling). Do not bump the respirator against the chest.

v. Talking. Talk aloud and slowly for several minutes. The following paragraph is called the Rainbow Passage. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement. Alternative passages which serve the same purpose may also be used.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two end apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

vi. Jogging in place.

vii. Breathe normally.

9. The test subject shall indicate to the test conductor if the irritant smoke is detected. If smoke is detected, the test conductor shall stop the test. In this case, the tested respirator is rejected and another respirator shall be selected.

10. Each test subject passing the smoke test (i.e. without detecting the smoke) shall be given a sensitivity check of smoke from the same tube to determine if the test subject reacts to the smoke. Failure to evoke a response shall void the fit test.

11. Steps B4, B9, B10 of this fit test protocol shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agents

12. Respirators successfully tested by the protocol may be used in contaminated atmospheres up to ten times the PEL of MDA.

13. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

14. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

15. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician trained in respirator diseases or pulmonary medicine to determine whether the test subject can wear a respirator while performing her or his duties.

16. Qualitative fit testing shall be repeated at least every 12 months.

17. In addition, because the sealing of the respirator may be affected, qualitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

C. *Recordkeeping*

A summary of all test results shall be maintained by the employer for 3 years. The summary shall include:

(1) Name of test subject

(2) Date of testing.

(3) Name of test conductor.

(4) Respirators selected (indicate manufacturer, model, size and approval number).

(5) Testing agent.

Quantitative Fit Test Procedures

1. *General.*

a. The method applies to the negative-pressure nonpowered air-purifying respirators only.

b. The employer shall assign an individual (with help as needed) who shall assume the full responsibility for implementing the respirator quantitative fit test program.

2. *Definition.*

a. "Quantitative Fit Test" means the measurement of the effectiveness of a respirator seal in excluding the ambient atmosphere. The test is performed by dividing the measured concentration of challenge agent in a test chamber by the measured concentration of the challenge agent inside the respirator facepiece when the normal air purifying element has been replaced by an essentially perfect purifying element.

b. "Challenge Agent" means the air contaminant introduced into a test chamber so that its concentration inside and outside the respirator may be compared.

c. "Test Subject" means the person wearing the respirator for quantitative fit testing.

d. "Normal Standing Position" means standing erect and straight with arms down along the sides and looking straight ahead.

e. "Fit Factor" means the ratio of challenge agent concentration outside with respect to the inside of a respirator inlet covering (facepiece or enclosure).

3. *Apparatus.*

a. Instrumentation. Corn oil, sodium chloride or other appropriate aerosol generation, dilution, and measurement systems shall be used for quantitative fit test.

b. Test chamber. The test chamber shall be large enough to permit all test subjects to freely perform all required exercises without distributing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air yet uniform in concentration throughout the chamber.

c. When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

d. The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000.

e. The combination of substitute air-purifying elements (if any), challenge agent, and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of PEL to the challenge agent at any time during the testing process.

f. The sampling port on the test specimen respirator shall be placed and constructed so that there is no detectable leak around the port, a free air flow is allowed into the sampling line at all times and so there is no interference with the fit or performance of the respirator.

g. The test chamber and test set-up shall permit the person administering the test to observe one test subject inside the chamber during the test.

h. The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent constant within a 10 percent variation for the duration of the test.

i. The time lag (interval between an event and its being recorded on the strip chart) of the instrumentation may not exceed 2 seconds.

j. The tubing for the test chamber atmosphere and for the respirator sampling port shall be the same diameter,length and material. It shall be kept as short as possible. The smallest diameter tubing recommended by the manufacturer shall be used.

k. The exhaust flow from the test chamber shall pass through a high-efficiency filter before release to the room.

l. When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

4. *Procedural requirements.*

a. The fitting of half-mask respirators should be started with those having multiple sizes and a variety of interchangeable cartridges and canisters such as the MSA Comfr II-M, Norton M, Survivair M A-O M or Scott-M. Use either of the tests outlined below to assure that the facepiece is properly adjusted.

(1) *Positive pressure test.* With the exhaust port(s) blocked the negative pressure of slight inhalation should remain constant for several seconds.

(2) *Negative pressure test.* With the intake port(s) blocked the negative pressure slight inhalation should remain constant for several seconds.

b. After a facepiece is adjusted, the test subject shall wear the facepiece for at least 5 minutes before conducting a qualitive test by using either of the methods described below and using the exercise regime described in 5.a., b., c., d. and e.

(1) *Isoamyl acetate test.* When using organic vapor cartridges, the test subject who can smell the odor should be unable to detect the odor of isoamyl acetate squirted into the air near the most vulnerable portions of the facepiece seal. In a location which is separated from the test area, the test subject shall be instructed to close her/his eyes during the test period. A combination cartridge or canister with organic vapor and high-efficiency filters shall be used when available for the particular mask being tested. The test subject shall be given an opportunity to smell the odor of isoamyl acetate before the test is conducted.

(2) *Irritant fume test.* When using high-efficiency filters, the test subject should be unable to detect the odor of irritant fume (stannic chloride or titanium tetrachloride ventilation smoke tubes) squirted into the air near the most vulnerable portions of the facepiece seal. The test subject shall be instructed to close her/his eyes during the test period.

c. The test subject may enter the quantitative testing chamber only if she or he has obtained a satisfactory fit by as stated in 4.b. of this Appendix.

d. Before the subject enters the test chamber, a reasonably stable challenge agent concentration shall be measured in the test chamber.

e. Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half-mask and 1 percent for a full facepiece.

f. A stable challenge agent concentration shall be obtained prior to the actual start of testing.

g. Respirator restraining straps may not be overtightened for testing. The straps shall be adjusted by the wearer to give a reasonably comfortable fit typical of normal use.

5. *Exercise Regime.* Prior to entering the test chamber, the test subject shall be given complete instructions as to her/his part in the test procedures. The test subject shall perform the following exercises, in the order given, for each independent test.

a. *Normal Breathing (NB).* In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

b. *Deep Breathing (DB).* In the normal standing position the subject shall do deep breathing for at least one minute pausing so as not to hyperventilate.

c. *Turning head side to side (SS).* Standing in place the subject shall slowly turn his head from side between the extreme positions to each side. The head shall be held at each extreme position for at least 5 seconds. Perform for at least five complete cycles.

d. *Moving head up and down(UD).* Standing in place, the subject shall slowly move his head up and down between the extreme position straight up and the extreme position straight down. The head shall be held at each extreme position for at least 5 seconds. Perform for at least five complete cycles.

e. *Reading (R).* The subject shall read out slowly and loud so as to be heard clearly by the test conductor or monitor. The test subject shall read the "rainbow passage" at the end of this section.

f. *Grimace (G).* The test subject shall grimace, smile, frown, and generally contort the face using the facial muscles. Continue for at least 15 seconds.

g. *Bend over and touch toes (B).* The test subject shall bend at the waist and touch toes and return to upright position. Repeat for at least one minute.

h. *Jogging in place (J).* The test subject shall perform jog in place for at least one minute.

i. *Normal Breathing (NB).* In the normal standing position, without talking, the subject shall breathe normally for at least one minute.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

6. *Termination of Tests.* The test shall be terminated whenever any single peak penetration exceeds 5 percent for half-masks and 1 percent for full facepieces. The test subject may be refitted and retested. If two

of the three required tests are terminated, the fit shall be deemed inadequate. (See paragraph 4.h.).

7. *Calculation of Fit Factors.*

a. The fit factor determined by the quantitative fit test equals the average concentration inside the respirator.

b. The average test chamber concentration is the arithmetic average of the test chamber concentration at the beginning and of the end of the test.

c. The average peak concentration of the challenge agent inside the respirator shall be the arithmetic average peak concentrations for each of the nine exercises of the test which are computed as the arithmetic average of the peak concentrations found for each breath during the exercise.

d. The average peak concentration for an exercise may be determined graphically if there is not a great variation in the peak concentrations during a single exercise.

8. *Interpretation of Test Results.* The fit factor measured by the quantitative fit testing shall be the lowest of the three protection factors resulting from three independent tests.

9. *Other Requirements*

a. the test subject shall not be permitted to wear a half-mask or full facepiece if the minimum fit factor of 250 or 1,250, respectively, cannot be obtained. If hair growth or apparel interfere with a satisfactory fit, then they shall be altered or removed so as to eliminate interference and allow a satisfactory fit. If a satisfactory fit is still not attained, the test subject must use a positive-pressure respirator such as powered air-purifying respirators, supplied air respirator, or self-contained breathing apparatus.

b. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface.

c. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician to determine whether the test subject can wear a respirator while performing her or his duties.

d. The test subject shall be given the opportunity to wear the assigned respirator for one week. If the respirator does not provide a satisfactory fit during actual use, the test subject may request another QNFT which shall be performed immediately.

e. A respirator fit factor card shall be issued to the these subject with the following information:

(1) Name

(2) Date of fit test.

(3) Protection factors obtained through each manufacturer, model and approval number of respirator tested.

(4) Name and signature of the person that conducted the test.

f. Filters used for qualitative or quantitative fit testing shall be replaced weekly, whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily or sooner if there is any indication of breakthrough by the test agent.

10. *Retesting.* In addition, because the sealing of the respirator may be affected, quantitative fit testing shall be repeated immediately when the test subject has a:

(1) Weight change of 20 pounds or more,

(2) Significant facial scarring in the area of the facepiece seal,

(3) Significant dental changes; i.e.; multiple extractions without prothesis, or acquiring dentures,

(4) Reconstructive or cosmetic surgery, or

(5) Any other condition that may interfere with facepiece sealing.

11. *Recordkeeping.*

a. A summary of all test results shall be maintained for 3 years. The summary shall include:

(1) Name of test subject

(2) Date of testing.

(3) Name of the test conductor.

(4) Fit factors obtained from every respirator tested (indicate manufacturer, model, size and approval number).

b. A copy of all test data including the strip chart and results shall be kept for at least 5 years.

§ 1915.1120 Access to employee exposure and medical records.

(a) *Purpose.* The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records; and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act. Access by employees, their representatives, and the Assistant Secretary is necessary to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease. Each employer is responsible for assuring compliance with this section, but the activities involved in complying with the access to medical records provisions can be carried out, on behalf of the employer, by the physician or other health care personnel in charge of employee medical records. Except as expressly provided, nothing in this section is intended to affect existing legal and ethical obligations concerning the maintenance and confidentiality of employee medical information, the duty to disclose information to a patient/employee or any other aspect of the medical-care relationship, or affect existing legal obligations concerning the protection of trade secret information.

(b) *Scope and application.* (1) This section applies to each general industry, maritime, and construction employer who makes, maintains, contracts for, or has access to employee exposure or medical records, or analyses thereof, pertaining to employees exposed to toxic substances or harmful physical agents.

(2) This section applies to all employee exposure and medical records, and analyses thereof, of such employees, whether or not the records are mandated by specific occupational safety and health standards.

(3) This section applies to all employee exposure and medical records, and analyses thereof, made or maintained in any manner, including on an in-house of contractual (*e.g.*, fee-for-service) basis. Each employer shall assure that the preservation and access requirements of this section are complied with regardless of the manner in which the records are made or maintained.

(c) *Definitions*—(1) *Access* means the right and opportunity to examine and copy.

(2) *Analysis using exposure or medical records* means any compilation of data or any statistical study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

(3) *Designated representative* means any individual or organization to whom an employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analyses using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

(4) *Employee* means a current employee, a former employee, or an employee being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee's legal representative may directly exercise all the employee's rights under this section.

(5) *Employee exposure record* means a record containing any of the following kinds of information:

(i) Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;

(ii) Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (*e.g.*, the level of a chemical in the blood, urine, breath, hair, fingernails, etc) but not including

results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;

(iii) Material safety data sheets indicating that the material may pose a hazard to human health; or

(iv) In the absence of the above, a chemcial inventory or any other record which reveals where and when used and the identity (*e.g.*, chemical, common, or trade name) of a toxic substance or harmful physical agent.

(6)(i) *Employee medical record* means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel or technician, including:

(A) Medical and employment questionnaires or histories (including job description and occupational exposures),

(B) The results of medical examinations (pre-employment, pre-assignment, periodic, or episodic) and laboratory tests (including chest and other X–ray examinations taken for the purposes of establishing a base-line or detecting occupational illness, and all biological monitoring not defined as an "employee exposure record"),

(C) Medical opinions, diagnoses, progress notes, and recommendations,

(D) First aid records,

(E) Descriptions of treatments and prescriptions, and

(F) Employee medical complaints.

(ii) "Employee medical record" does not include medical information in the form of:

(A) Physical specimens (*e.g.*, blood or urine samples) which are routinely discarded as a part of normal medical practice; or

(B) Records concerning health insurance claims if maintained separately from the employer's medical program and its records, and not accessible to the employer by employee name or other direct personal identifier (*e.g.*, social security number, payroll number, etc.); or

(C) Records created solely in preparation for litigation which are privileged from discovery under the applicable rules of procedure or evidence; or

(D) Records concerning voluntary employee assistance programs (alcohol, drug abuse, or personal counseling programs) if maintained separately from the employer's medical program and its records.

(7) *Employer* means a current employer, a former employer, or a successor employer.

(8) *Exposure* or *exposed* means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes past exposure and potential (*e.g.*, accidental or possible) exposure, but does not include situations where the employer can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical non-occupational situations.

(9) *Health professional* means a physician, occupational health nurse, industrial hygienist, toxicologist, or epidemiologist, providing medical or other occupational health services to exposed employees.

(10) *Record* means any item, collection, or grouping of information regardless of the form or process by which it is maintained (*e.g.*, paper document, microfiche, microfilm, X-ray film, or automated data processing).

(11) *Specific chemical identity* means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

(12)(i) *Specific written consent* means a written authorization containing the following:

(A) The name and signature of the employee authorizing the release of medical information,

(B) The date of the written authorization,

(C) The name of the individual or organization that is authorized to release the medical information,

(D) The name of the designated representative (individual or organization) that is authorized to receive the released information,

(E) A general description of the medical information that is authorized to be released,

(F) A general description of the purpose for the release of the medical information, and

(G) A date or condition upon which the written authorization will expire (if less than one year).

(ii) A written authorization does not operate to authorize the release of medical information not in existence on the date of written authorization, unless the release of future information is expressly authorized, and does not operate for more than one year from the date of written authorization.

(iii) A written authorization may be revoked in writing prospectively at any time.

(13) *Toxic substance or harmful physical agent* means any chemical substance, biological agent (bacteria, virus, fungus, etc.), or physical stress (noise, heat, cold, vibration, repetitive motion, ionizing and non-ionizing radiation, hypo—or hyperbaric pressure, etc.) which:

(i) Is listed in the least printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS); or

(ii) Has yielded positive evidence of an acute or chronic health hazard in testing conducted by, or known to, the employer; or

(iii) Is the subject of a material safety data sheet kept by or known to the employer indicating that the material may pose a hazard to human health.

(14) *Trade secret* means any confidential formula, pattern, process, device, or information or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

(d) *Preservation of records.* (1) Unless a specific occupational safety and health standard provides a different period of time, each employer shall assure the preservation and retention of records as follows:

(i) *Employee medical records.* The medical record for each employee shall be preserved and maintained for at least the duration of employment plus thirty (30) years, except that the following types of records need not be retained for any specified period:

(A) Health insurance claims records maintained separately from the employer's medical program and its records,

(B) First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer's medical program and its records, and

(C) The medical records of employees who have worked for less than (1) year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment.

(ii) *Employee exposure records.* Each employee exposure record shall be preserved and maintained for at least thirty (30) years, except that:

(A) Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year as long as the sampling results, the collection methodology

(sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty (30) years; and

(B) Material safety data sheets and paragraph (c)(5)(iv) records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years;[1] and

(C) Biological monitoring results designated as exposure records by specific occupational safety and health standards shall be preserved and maintained as required by the specific standard.

(iii) *Analyses using exposure or medical records.* Each analysis using exposure or medial records shall be preserved and maintained for at least thirty (30) years.

(2) Nothing in this section is intended to mandate the form, manner, or process by which an employer preserves a record as long as the information contained in the record is preserved and retrievable, except that chest X-ray films shall be preserved in their original state.

(e) *Access to records*—(1) *General.* (i) Whenever an employee or designated representative requests access to a record, the employer shall assure that access is provided in a reasonable time, place, and manner. If the employer cannot reasonably provide access to the record within fifteen (15) working days, the employer shall within the fifteen (15) working days apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

(ii) The employer may require of the requester only such information as should be readily known to the requester and which may be necessary to locate or identify the records being requested (*e.g.*, dates and locations where the employee worked during the time period in question).

(iii) Whenever an employee or designated representative requests a copy of a record, the employer shall assure that either:

(A) A copy of the record is provided without cost to the employee or representative,

(B) The necessary mechanical copying facilities (*e.g.*, photocopying) are made available without cost to the employee or representative for copying the record, or

(C) The record is loaned to the employee or representative for a reasonable time to enable a copy to be made.

(iv) In the case of an original X-ray, the employer may restrict access to on-site examination or make other suitable arrangements for the temporary loan of the X-ray.

(v) Whenever a record has been previously provided without cost to an employee or designated representative, the employer may charge reasonable, non-discriminatory administrative costs (*i.e.*, search and copying expenses but not including overhead expenses) for a request by the employee or designated representative for additional copies of the record, except that

(A) An employer shall not charge for an initial request for a copy of new information that has been added to a record which was previously provided; and

(B) An employer shall not charge for an initial request by a recognized or certified collective bargaining agent for a copy of an employee exposure record or an analysis using exposure or medical records.

(vi) Nothing in this section is intended to preclude employees and collective bargaining agents from collectively bargaining to obtain access to information in addition to that available under this section.

(2) *Employee and designated representative access*—(i) *Employee exposure records.* (A) Except as limited by paragraph (f) of this section, each employer shall, upon request, assure the access to each employee and designated representative to employee exposure records relevant to the employee. For the purpose of this section, an exposure record relevant to the employee consists of:

(*1*) A record which measures or monitors the amount of a toxic substance or harmful physical agent to which the employee is or has been exposed;

(*2*) In the absence of such directly relevant records, such records of other employees with past or present job duties or working conditions related to or similar to those of the employee to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents to which the employee is or has been subjected, and

(*3*) Exposure records to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents at workplaces or under working conditions to which the employee is being assigned or transferred.

(B) Requests by designated representatives for unconsented access to employee exposure records shall be in writing and shall specify with reasonable particularity:

(*1*) The records requested to be disclosed; and

(*2*) The occupational health need for gaining access to these records.

(ii) *Employee medical records.* (A) Each employer shall, upon request, assure the access of each employee to employee medical records of which the employee is the subject, except as provided in paragraph (e)(2)(ii)(D) of this section.

(B) Each employer shall, upon request, assure the access of each designated representative to the employee medical records of any employee who has given the designated representative specific written consent. Appendix A to this section contains a sample form which may be used to establish specific written consent for access to employee medical records.

(C) Whenever access to employee medical records is requested, a physician representing the employer may recommend that the employee or designated representative:

(*1*) Consult with the physician for the purposes of reviewing and discussing the records requested,

(*2*) Accept a summary of material facts and opinions in lieu of the records requested, or

(*3*) Accept release of the requested records only to a physician or other designated representative.

(D) Whenever an employee requests access to his or her employee medical records, and a physician representing the employer believes that direct employee access to information contained in the records regarding a specific diagnosis of a terminal illness or a psychiatric condition could be detrimental to the employee's health, the employer may inform the employee that access will only be provided to a designated representative of the employee having specific written consent, and deny the employee's request for direct access to this information only. Where a designated representative with specific written consent requests access to information so withheld, the employer shall assure the access of the designated representative to this information, even when it is known that the designated representative will give the information to the employee.

(E) A physician, nurse, or other responsible health care personnel

[1] Material safety data sheets must be kept for those chemicals currently in use that are effected by the Hazard Communication Standard in accordance with 29 CFR 1915.1200(g).

maintaining medical records may delete from requested medical records the identity of a family member, personal friend, or fellow employee who has provided confidential information concerning an employee's health status.

(iii) *Analyses using exposure or medical records.* (A) Each employee shall, upon request, assure the access of each employee and designated representative to each analysis using exposure or medical records concerning the employee's working conditions or workplace.

(B) Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (exact age, height, weight, race, sex, date of initial employment, job title, etc.), the employer shall assure that personal identifiers are removed before access is provided. If the employer can demonstrate that removal of personal identifiers from an analysis is not feasible, access to the personally identifiable portions of the analysis need not be provided.

(3) *OSHA access.* (i) Each employer shall, upon request, and without derogation of any rights under the Constitution or the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, that the employer chooses to exercise, assure the prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records. Rules of agency practice and procedure governing OSHA access to employee medical records are contained in 29 CFR 1913.10.

(ii) Whenever OSHA seeks access to personally identifiable employee medical information by presenting to the employer a written access order pursuant to 29 CFR 1913.10(d), the employer shall prominently post a copy of the written access order and its accompanying cover letter for at least fifteen (15) working days.

(f) *Trade secrets.* (1) Except as provided in paragraph (f)(2) of this section, nothing in this section precludes an employer from deleting from records requested by a health professional, employee, or designated representative any trade secret data which discloses manufacturing processes, or discloses the percentage of a chemical substance in mixture, as long as the health professional, employee, or designated representative is notified that information has been deleted. Whenever deletion of trade secret information substantially impairs evaluation of the place where or the time when exposure to a toxic substance or harmful physical agent occurred, the employer shall provide alternative information which is sufficient to permit the requesting party to identify where and when exposure occurred.

(2) The employer may withhold the specific chemical identity, including the chemical name and other specific identification of a toxic substance from a disclosable record provided that:

(i) The claim that the information withheld is a trade secret can be supported;

(ii) All other available information on the properties and effects of the toxic substance is disclosed;

(iii) The employer informs the requesting party that the specific chemical identity is being withheld as a trade secret; and

(iv) The specific chemical identity is made available to health professionals, employees and designated representatives in accordance with the specific applicable provisions of this paragraph.

(3) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a toxic substance is necessary for emergency or first-aid treatment, the employer shall immediately disclose the specific chemical identity of a trade secret chemical to the treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (f)(4) and (f)(5), as soon as circumstances permit.

(4) In non-emergency situations, an employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under paragraph (f)(2) of this section, to a health professional, employee, or designated representative if:

(i) The request is in writing;

(ii) The request describes with reasonable detail one or more of the following occupational health needs for the information:

(A) To assess the hazards of the chemicals to which employees will be exposed;

(B) To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

(C) To conduct pre-assignment or periodic medical surveillance of exposed employees;

(D) To provide medical treatment to exposed employees;

(E) To select or assess appropriate personal protective equipment for exposed employees;

(F) To design or assess engineering controls or other protective measures for exposed employees; and

(G) To conduct studies to determine the health effects of exposure.

(iii) The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information would not enable the health professional, employee or designated representative to provide the occupational health services described in paragraph (f)(4)(ii) of this section:

(A) The properties and effects of the chemical;

(B) Measures for controlling workers' exposure to the chemical;

(C) Methods of monitoring and analyzing worker exposure to the chemical; and,

(D) Methods of diagnosing and treating harmful exposures to the chemical;

(iv) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(v) The health professional, employee, or designated representative and the employer or contractor of the services of the health professional or designated representative agree in a written confidentiality agreement that the health professional, employee or designated representative will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (f)(9) of this section, except as authorized by the terms of the agreement or by the employer.

(5) The confidentiality agreement authorized by paragraph (f)(4)(iv) of this section:

(i) May restrict the use of the information to the health purposes indicated in the written statement of need;

(ii) May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

(iii) May not include requirements for the posting of a penalty bond.

(6) Nothing in this section is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(7) If the health professional, employee or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the employer who provided the information shall be informed by the health professional prior to, or at the same time as, such disclosure.

(8) If the employer denies a written request for disclosure of a specific chemical identity, the denial must:

(i) Be provided to the health professional, employee or designated representative within thirty days of the request;

(ii) Be in writing;

(iii) Include evidence to support the claim that the specific chemical identity is a trade secret;

(iv) State the specific reasons why the request is being denied; and,

(v) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

(9) The health professional, employee, or designated representative whose request for information is denied under paragraph (f)(4) of this section may refer the request and the written denial of the request to OSHA for consideration.

(10) When a heath professional employee, or designated representative refers a denial to OSHA under paragraph (f)(9) of this section, OSHA shall consider the evidence to determine if:

(i) The employer has supported the claim that the specific chemical identity is a trade secret;

(ii) The health professional employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and

(iii) The health professional, employee or designated representative has demonstrated adequate means to protect the confidentiality.

(11)(i) If OSHA determines that the specific chemical identity requested under paragraph (f)(4) of this section is not a *bona fide* trade secret, or that it is a trade secret but the requesting health professional, employee or designated representatives has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means for complying with the terms of such agreement, the employer will be subject to citation by OSHA.

(ii) If an employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health needs are met without an undue risk of harm to the employer.

(12) Notwithstanding the existence of a trade secret claim, an employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(13) Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is trade secret.

(g) *Employee information.* (1) Upon an employee's first entering into employment, and at least annually thereafter, each employer shall inform current employees covered by this section of the following:

(i) The existence, location, and availability of any records covered by this section;

(ii) The person responsible for maintaining and providing access to records; and

(iii) Each employee's rights of access to these records.

(2) Each employer shall keep a copy of this section and its appendices, and make copies readily available, upon request, to employees. The employer shall also distribute to current employees any informational materials concerning this section which are made available to the employer by the Assistant Secretary of Labor for Occupational Safety and Health.

(h) *Transfer of records.* (1) Whenever an employer is ceasing to do business, the employer shall transfer all records subject to this section to the successor employer. The successor employer shall receive and maintain these records.

(2) Whenever an employer is ceasing to do business and there is no successor employer to receive and maintain the records subject to this standard, the employer shall notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of the employer's business.

(3) Whenever an employer either is ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, the employer shall:

(i) Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard; or

(ii) Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

(4) Where an employer regularly disposes of records required to be preserved for at least thirty (30) years, the employer may, with at least (3) months notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.

(i) *Appendices.* The information contained in appendices A and B to this section is not intended, by itself, to create any additional obligations not otherwise imposed by this section nor detract from any existing obligation.

(Approved by the Office of Management and Budget under control number 1218–0065)

Appendix A to § 1915.1120—Sample Authorization Letter for the Release of Employee Medical Record Information to a Designated Representative (Non-Mandatory)

I, ———— (full name of worker/patient), hereby authorize ———— (individual or organization holding the medical records) to release to ———— (individual or organization authorized to receive the medical information), the following medical information from my personal medical records:

————

————

(Describe generally the information desired to be released)

I give my permission for this medical information to be used for the following purpose:

————

————

but I do not give permission for any other use or re-disclosure of this information.

(**Note:** Several extra lines are provided below so that you can place additional restrictions on this authorization letter if you want to. You may, however, leave these lines blank. On the other hand, you may want to (1) specify a particular expiration date for this letter (if less than one year); (2) describe medical information to be created in the future that you intend to be covered by this authorization letter; or (3) describe portions of the medical information in your records which you do not intend to be released as a result of this letter.)

————

————

————

————

Full name of Employee or Legal Representative

Signature of Employee or Legal Representative

Date of Signature

Appendix B to § 1915.1120—Availability of NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) (Non-Mandatory)

Section 1915.1120 applies to all employee exposure and medical records, and analyses thereof, of employees exposed to toxic substances or harmful physical agents (paragraph (b)(2)). The term *toxic substance or harmful physical agent* is defined by paragraph (c)(13) to encompass chemical substances, biological agents, and physical stresses for which there is evidence of harmful health effects. The regulation uses the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS) as one of the chief sources of information as to whether evidence of harmful health effects exists. If a substance is listed in the latest printed RTECS, the regulation applies to exposure and medical records (and analyses of these records) relevant to employees exposed to the substance.

It is appropriate to note that the final regulation does not require that employers purchase a copy of RTECS, and many employers need not consult RTECS to ascertain whether their employee exposure or medical records are subject to the rule. Employers who do not currently have the latest printed edition of the NIOSH RTECS, however, may desire to obtain a copy. The RTECS is issued in an annual printed edition as mandated by section 20(a)(6) of the Occupational Safety and Health Act (29 U.S.C. 669(a)(6)).

The Introduction to the 1980 printed edition describes the RTECS as follows:

"The 1980 edition of the Registry of Toxic Effects of Chemical Substances, formerly known as the Toxic Substances list, is the ninth revision prepared in compliance with the requirements of Section 20(a)(6) of the Occupational Safety and Health Act of 1970 (Public Law 91–596). The original list was completed on June 28, 1971, and has been updated annually in book format. Beginning in October 1977, quarterly revisions have been provided in microfiche. This edition of the Registry contains 168,096 listings of chemical substances: 45,156 are names of different chemicals with their associated toxicity data and 122,940 are synonyms. This edition includes approximately 5,900 new chemical compounds that did not appear in the 1979 Registry. (p. xi)

"The Registry's purposes are many, and it serves a variety of users. It is a single source document for basic toxicity information and for other data, such as chemical identifiers ad information necessary for the preparation of safety directives and hazard evaluations for chemical substances. The various types of toxic effects linked to literature citations provide researchers and occupational health scientists with an introduction to the toxicological literature, making their own review of the toxic hazards of a given substance easier. By presenting data on the lowest reported doses that produce effects by several routes of entry in various species, the Registry furnishes valuable information to those responsible for preparing safety data sheets for chemical substances in the workplace. Chemical and production engineers can use the Registry to identify the hazards which may be associated with chemical intermediates in the development of final products, and thus can more readily select substitutes or alternative processes which may be less hazardous. Some organizations, including health agencies and chemical companies, have included the NIOSH Registry accession numbers with the listing of chemicals in their files to reference toxicity information associated with those chemicals. By including foreign language chemical names, a start has been made toward providing rapid identification of substances produced in other countries. (p. xi)

"In this edition of the Registry, the editors intend to identify "all known toxic substances" which may exist in the environment and to provide pertinent data on the toxic effects from known doses entering an organism by any route described. (p xi)

"It must be reemphasized that the entry of a substance in the Registry does not automatically mean that it must be avoided. A listing does mean, however, that the substance has the documented potential of being harmful if misused, and care must be exercised to prevent tragic consequences. Thus, the Registry lists many substances that are common in everyday life and are in nearly every household in the United States. One can name a variety of such dangerous substances: prescription and non-prescription drugs; food additives; pesticide concentrates, sprays, and dusts; fungicides; herbicides; paints; glazes, dyes; bleaches and other household cleaning agents; alkalies; and various solvents and diluents. The list is extensive because chemicals have become an integral part of our existence."

The RTECS printed edition may be purchased from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, DC 20402 (202–783–3238).

Some employers may desire to subscribe to the quarterly update to the RTECS which is published in a microfiche edition. An annual subscription to the quarterly microfiche may be purchased from the GPO (Order the "Microfiche Edition, Registry of Toxic Effects of Chemical Substances"). Both the printed edition and the microfiche edition of RTECS are available for review at many university and public libraries throughout the country. The latest RTECS editions may also be examined at the OSHA Technical Data Center, Room N2439—Rear, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210 (202–219–7500), or at any OSHA Regional or Area Office (*See*, major city telephone directories under U.S. Government—Labor Department).

§ 1915.1450 Occupational exposure to hazardous chemicals in laboratories.

(a) *Scope and application.* (1) This section shall apply to all employers engaged in the laboratory use of hazardous chemicals as defined below.

(2) Where this section applies, it shall supersede, for laboratories, the requirements of all other OSHA health standards in 29 CFR part 1910, subpart Z, except as follows:

(i) For any OSHA health standard, only the requirement to limit employee exposure to the specific permissible exposure limit shall apply for laboratories, unless that particular standard states otherwise or unless the conditions of paragraph (a)(2)(iii) of this section apply.

(ii) Prohibition of eye and skin contact where specified by any OSHA health standard shall be observed.

(iii) Where the action level (or in the absence of an action level, the permissible exposure limit) is routinely exceeded for an OSHA regulated substance with exposure monitoring and medical surveillance requirements, paragraphs (d) and (g)(1)(ii) of this section shall apply.

(3) This section shall not apply to:

(i) Uses of hazardous chemicals which do not meet the definition of laboratory use, and in such cases, the employer shall comply with the relevant standard in 29 CFR part 1915, subpart Z, even if such use occurs in a laboratory.

(ii) Laboratory uses of hazardous chemicals which provide no potential for employee exposure. Examples of such conditions might include:

(A) Procedures using chemically-impregnated test media such as Dip-and-Read tests where a reagent strip is dipped into the specimen to be tested and the results are interpreted by comparing the color reaction to a color chart supplied by the manufacturer of the test strip; and

(B) Commercially prepared kits such as those used in performing pregnancy tests in which all of the reagents needed to conduct the test are contained in the kit.

(b) *Definitions*—

Action level means a concentration designated in 29 CFR part 1915 for a specific substance, calculated as an eight (8)-hour time-weighted average, which initiates certain required activities such as exposure monitoring and medical surveillance.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Carcinogen (see *select carcinogen*).

Chemical Hygiene Officer means an employee who is designated by the

employer, and who is qualified by training or experience, to provide technical guidance in the development and implementation of the provisions of the Chemical Hygiene Plan. This definition is not intended to place limitations on the position description or job classification that the designated indvidual shall hold within the employer's organizational structure.

Chemical Hygiene Plan means a written program developed and implemented by the employer which sets forth procedures, equipment, personal protective equipment and work practices that (i) are capable of protecting employees from the health hazards presented by hazardous chemicals used in that particular workplace and (ii) meets the requirements of paragraph (e) of this section.

Combustible liquid means any liquid having a flashpoint at or above 100 °F (37.8 °C), but below 200 °F (93.3 °C), except any mixture having components with flashpoints of 200 °F (93.3 °C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Compressed gas means:

(i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 °F (21.1 °C); or

(ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 °F (54.4 °C) regardless of the pressure at 70 °F (21.1 °C); or

(iii) A liquid having a vapor pressure exceeding 40 psi at 100 °F (37.8 °C) as determined by ASTM D–323–72.

Designated area means an area which may be used for work with "select carcinogens," reproductive toxins or substances which have a high degree of acute toxicity. A designated area may be the entire laboratory, an area of a laboratory or a device such as a laboratory hood.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers or failure of control equipment which results in an uncontrolled release of a hazardous chemical into the workplace.

Employee means an individual employed in a laboratory workplace who may be exposed to hazardous chemicals in the course of his or her assignments.

Explosive means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Flammable means a chemical that falls into one of the following categories:

(i) *Aerosol, flammable* means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame protection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;

(ii) *Gas, flammable* means:

(A) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less; or

(B) A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12 percent by volume, regardless of the lower limit.

(iii) *Liquid, flammable* means any liquid having a flashpoint below 100 °F (37.8 °C), except any mixture having components with flashpoints of 100 °F (37.8 °C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.

(iv) *Solid, flammable* means a solid, other than a blasting agent or explosive as defined in § 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

Flashpoint means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:

(i) Tagliabue Closed Tester (See American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24–1979 (ASTM D 56–79))-for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100 °F (37.8 °C), that do not contain suspended solids and do not have a tendency to form a surface film under test; or

(ii) Pensky-Martens Closed Tester (see American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7–1979 (ASTM D 93–79))-for liquids with a viscosity equal to or greater than 45 SUS at 100 °F (37.8 °C), or that contain suspended solids, or that have a tendency to form a surface film under test; or

(iii) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278–78)).

Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

Hazardous chemical means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic systems, and agents which damage the lungs, skin, eyes, or mucous membranes.

Appendices A and B of the Hazard Communication Standard (29 CFR 1915.1200) provide further guidance in defining the scope of health hazards and determining whether or not a chemical is to be considered hazardous for purposes of this standard.

Laboratory means a facility where the "laboratory use of hazardous chemicals" occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-production basis.

Laboratory scale means work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person. "Laboratory scale" excludes those workplaces whose function is to produce commercial quantities of materials.

Laboratory-type hood means a device located in a laboratory, enclosure on five sides with a moveable sash or fixed partial enclosed on the remaining side; constructed and maintained to draw air from the laboratory and to prevent or minimize the escape of air contaminants into the laboratory; and allows chemical manipulations to be conducted in the enclosure without insertion of any portion of the employee's body other than hands and arms.

Walk-in hoods with adjustable sashes meet the above definition provided that the sashes are adjusted during use so that the airflow and the exhaust of air contaminants are not compromised and employees do not work inside the enclosure during the release of airborne hazardous chemicals.

Laboratory use of hazardous chemicals means handling or use of such chemicals in which all of the following conditions are met:

(i) Chemical manipulations are carried out on a "laboratory scale;"

(ii) Multiple chemical procedures or chemicals are used;

(iii) The procedures involved are not part of a production process, nor in any way simulate a production process; and

(iv) "Protective laboratory practices and equipment" are available and in common use to minimize the potential for employee exposure to hazardous chemicals.

Medical consultation means a

consultation which takes place between an employee and a licensed physician for the purpose of determining what medical examinations or procedures, if any, are appropriate in cases where a significant exposure to a hazardous chemical may have taken place.

Organic peroxide means an organic compound that contains the bivalent –O–O– structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer means a chemical other than a blasting agent or explosive as defined in § 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Physical hazard means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

Protective laboratory practices and equipment means those laboratory procedures, practices and equipment accepted by laboratory health and safety experts as effective, or that the employer can show to be effective, in minimizing the potential for employee exposure to hazardous chemicals.

Reproductive toxins means chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis)

Select carcinogen means any substance which meets one of the following criteria:

(i) It is regulated by OSHA as a carcinogen; or

(ii) It is listed under the category, "known to be carcinogens," in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or

(iii) It is listed under Group 1 ("carcinogenic to humans") by the International Agency for Research on Cancer Monographs (IARC) (latest editions); or

(iv) It is listed in either Group 2A or 2B by IARC or under the category, "reasonably anticipated to be carcinogens" by NTP, and causes statistically significant tumor incidence in experimental animals in accordance with any of the following criteria:

(A) After inhalation exposure of 6–7 hours per day, 5 days per week, for a significant portion of a lifetime to dosages of less than 10 mg/m^3;

(B) After repeated skin application of less than 300 (mg/kg of body weight) per week; or

(C) After oral dosages of less than 50 mg/kg of body weight per day.

Unstable (reactive) means a chemical which is the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

Water-reactive means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

(c) *Permissible exposure limits.* For laboratory uses of OSHA regulated substances, the employer shall assure that laboratory employees' exposures to such substances do not exceed the permissible exposure limits specified in 29 CFR part 1910, subpart Z.

(d) *Employee exposure determination*—(1) *Initial monitoring.* The employer shall measure the employee's exposure to any substance regulated by a standard which requires monitoring if there is reason to believe that exposure levels for that substance routinely exceed the action level (or in the absence of an action level, the PEL).

(2) *Periodic monitoring.* If the initial monitoring prescribed by paragraph (d)(1) of this section discloses employee exposure over the action level (or in the absence of an action level, the PEL), the employer shall immediately comply with the exposure monitoring provisions of the relevant standard.

(3) *Termination of monitoring.* Monitoring may be terminated in accordance with the relevant standard.

(4) *Employee notification of monitoring results.* The employer shall, within 15 working days after the receipt of any monitoring results, notify the employee of these results in writing either individually or by posting results in an appropriate location that is accessible to employees.

(e) *Chemical hygiene plan—General.* (Appendix A of this section is non-mandatory but provides guidance to assist employers in the development of the Chemical Hygiene Plan.) (1) Where hazardous chemicals as defined by this standard are used in the workplace, the employer shall develop and carry out the provisions of a written Chemical Hygiene Plan which is:

(i) Capable of protecting employees from health hazards associated with hazardous chemicals in that laboratory and

(ii) Capable of keeping exposures below the limits specified in paragraph (c) of this section.

(2) The Chemical Hygiene Plan shall be readily available to employees, employee representatives and, upon request, to the Assistant Secretary.

(3) The Chemical Hygiene Plan shall include each of the following elements and shall indicate specific measures that the employer will take to ensure laboratory employee protection:

(i) Standard operating procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals;

(ii) Criteria that the employer will use to determine and implement control measures to reduce employee exposure to hazardous chemicals including engineering controls, the use of personal protective equipment and hygiene practices; particular attention shall be given to the selection of control measures for chemicals that are known to be extremely hazardous;

(iii) A requirement that fume hoods and other protective equipment are functioning properly and specific measures that shall be taken to ensure proper and adequate performance of such equipment;

(iv) Provisions for employee information and training as prescribed in paragraph (f) of this section;

(v) The circumstances under which a particular laboratory operation, procedure or activity shall require prior approval from the employer or the employer's designee before implementation;

(vi) Provisions for medical consultation and medical examinations in accordance with paragraph (g) of this section;

(vii) Designation of personnel responsible for implementation of the Chemical Hygiene Plan including the assignment of a Chemical Hygiene Officer and, if appropriate, establishment of a Chemical Hygiene Committee; and

(viii) Provisions for additional employee protection for work with particularly hazardous substances. These include "select carcinogens," reproductive toxins and substances which have a high degree of acute toxicity. Specific consideration shall be given to the following provisions which shall be included where appropriate:

(A) Establishment of a designated area;

(B) Use of containment devices such as fume hoods or glove boxes;

(C) Procedures for safe removal of contaminated waste; and

(D) Decontamination procedures.

(4) The employer shall review and evaluate the effectiveness of the Chemical Hygiene Plan at least annually and update it as necessary.

(f) *Employee information and training.* (1) The employer shall provide employees with information and training to ensure that they are apprised of the hazards of chemicals present in their work area.

(2) Such information shall be provided at the time of an employee's initial assignment to a work area where hazardous chemicals are present and prior to assignments involving new exposure situations. The frequency of refresher information and training shall be determined by the employer.

(3) *Information.* Employees shall be informed of:

(i) The contents of this standard and its appendices which shall be made available to employees;

(ii) The location and availability of the employer's Chemical Hygiene Plan;

(iii) The permissible exposure limits for OSHA regulated substances or recommended exposure limits for other hazardous chemicals where there is no applicable OSHA standard;

(iv) Signs and symptoms associated with exposures to hazardous chemicals used in the laboratory; and

(v) The location and availability of known reference material on the hazards, safe handling, storage and disposal of hazardous chemicals found in the laboratory including, but not limited to, Material Safety Data Sheets received from the chemical supplier.

(4) *Training.* (i) Employee training shall include:

(A) Methods and observations that may be used to detect the presence or release of a hazardous chemical (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

(B) The physical and health hazards of chemicals in the work area; and

(C) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

(ii) The employee shall be trained on the applicable details of the employer's written Chemical Hygiene Plan.

(g) *Medical consultation and medical examinations.* (1) The employer shall provide all employees who work with hazardous chemicals an opportunity to receive medical attention, including any follow-up examinations which the examining physician determines to be necessary, under the following circumstances:

(i) Whenever an employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed in the laboratory, the employee shall be provided an opportunity to receive an appropriate medical examination.

(ii) Where exposure monitoring reveals an exposure level routinely above the action level (or in the absence of an action level, the PEL) for an OSHA regulated substance for which there are exposure monitoring and medical surveillance requirements, medical surveillance shall be established for the affected employee as prescribed by the particular standard.

(iii) Whenever an event takes place in the work area such as a spill, leak, explosion or other occurrence resulting in the likelihood of a hazardous exposure, the affected employee shall be provided an opportunity for a medical consultation. Such consultation shall be for the purpose of determining the need for a medical examination.

(2) All medical examinations and consultations shall be performed by or under the direct supervision of a licensed physician and shall be provided without cost to the employee, without loss of pay and at a reasonable time and place.

(3) *Information provided to the physician.* The employer shall provide the following information to the physician:

(i) The identity of the hazardous chemical(s) to which the employee may have been exposed;

(ii) A description of the conditions under which the exposure occurred including quantitative exposure data, if available; and

(iii) A description of the signs and symptoms of exposure that the employee is experiencing, if any.

(4) *Physician's written opinion.* (i) For examination or consultation required under this standard, the employer shall obtain a written opinion from the examining physician which shall include the following:

(A) Any recommendation for further medical follow-up;

(B) The results of the medical examination and any associated tests;

(C) Any medical condition which may be revealed in the course of the examination which may place the employee at increased risk as a result of exposure to a hazardous chemical found in the workplace; and

(D) A statement that the employee has been informed by the physician of the results of the consultation or medical examination and any medical condition that may require further examination or treatment.

(ii) The written opinion shall not reveal specific findings of diagnoses unrelated to occupational exposure.

(h) *Hazard identification.* (1) With respect to labels and material safety data sheets:

(i) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.

(ii) Employers shall maintain any material safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible to laboratory employees.

(2) The following provisions shall apply to chemical substances developed in the laboratory:

(i) If the composition of the chemical substance which is produced exclusively for the laboratory's use is known, the employer shall determine if it is a hazardous chemical as defined in paragraph (b) of this section. If the chemical is determined to be hazardous, the employer shall provide appropriate training as required under paragraph (f) of this section.

(ii) If the chemical produced is a byproduct whose composition is not known, the employer shall assume that the substance is hazardous and shall implement paragraph (e) of this section.

(iii) If the chemical substance is produced for another user outside of the laboratory, the employer shall comply with the Hazard Communication Standard (29 CFR 1915.1200) including the requirements for preparation of material safety data sheets and labeling.

(i) *Use of respirators.* Where the use of respirators is necessary to maintain exposure below permissible exposure limits, the employer shall provide, at no cost to the employee, the proper respiratory equipment. Respirators shall be selected and used in accordance with the requirements of 29 CFR 1910.134.

(j) *Recordkeeping.* (1) The employer shall establish and maintain for each employee an accurate record of any measurements taken to monitor employee exposures and any medical consultation and examinations including tests or written opinions required by this standard.

(2) The employer shall assure that such records are kept, transferred, and made available in accordance with 29 CFR 1915.1120.

(k) *Dates*—(1) *Effective date.* This section shall become effective May 1, 1990.

(2) *Start-up dates.* (i) Employers shall have developed and implemented a written Chemical Hygiene Plan no later than January 31, 1991.

(ii) Paragraph (a)(2) of this section shall not take effect until the employer has developed and implemented a written Chemical Hygiene Plan.

(l) *Appendices.* The information contained in the appendices is not intended, by itself, to create any additional obligations not otherwise imposed or to detract from any existing obligation.

Appendix A to § 1915.1450—National Research Council Recommendations Concerning Chemical Hygiene in Laboratories (Non-Mandatory)

Table of Contents

Foreword

Corresponding Sections of the Standard and This Appendix

A. General Principles

1. Minimize all Chemical Exposures
2. Avoid Underestimation of Risk
3. Provide Adequate Ventilation
4. Institute a Chemical Hygiene Program
5. Observe the PELs and TLVs

B. Responsibilities

1. Chief Executive Officer
2. Supervisor of Administrative Unit
3. Chemical Hygiene Officer
4. Laboratory Supervisor
5. Project Director
6. Laboratory Worker

C. The Laboratory Facility

1. Design
2. Maintenance
3. Usage
4. Ventilation

D. Components of the Chemical Hygiene Plan

1. Basic Rules and Procedures
2. Chemical Procurement, Distribution, and Storage
3. Environmental Monitoring
4. Housekeeping, Maintenance and Inspections
5. Medical Program
6. Personal Protective Apparel and Equipment
7. Records
8. Signs and Labels
9. Spills and Accidents
10. Training and Information
11. Waste Disposal

E. General Procedures for Working With Chemicals

1. General Rules for all Laboratory Work with Chemicals
2. Allergens and Embryotoxins
3. Chemicals of Moderate Chronic or High Acute Toxicity
4. Chemicals of High Chronic Toxicity
5. Animal Work with Chemicals of High Chronic Toxicity

F. Safety Recommendations

G. Material Safety Data Sheets

Foreword

As guidance for each employer's development of an appropriate laboratory Chemical Hygiene Plan, the following non-mandatory recommendations are provided. They were extracted from "Prudent Practices for Handling Hazardous Chemicals in Laboratories" (referred to below as "Prudent Practices"), which was published in 1981 by the National Research Council and is available from the National Academy Press, 2101 Constitution Ave., NW., Washington DC 20418.

"Prudent Practices" is cited because of its wide distribution and acceptance and because of its preparation by members of the laboratory community through the sponsorship of the National Research Council. However, none of the recommendations given here will modify any requirements of the laboratory standard. This Appendix merely presents pertinent recommendations from "Prudent Practices", organized into a form convenient for quick reference during operation of a laboratory facility and during development and application of a Chemical Hygiene Plan. Users of this appendix should consult "Prudent Practices" for a more extended presentation and justification for each recommendation.

"Prudent Practices" deals with both safety and chemical hazards while the laboratory standard is concerned primarily with chemical hazards. Therefore, only those recommendations directed primarily toward control of toxic exposures are cited in this appendix, with the term "chemical hygiene" being substituted for the word "safety". However, since conditions producing or threatening physical injury often pose toxic risks as well, page references concerning major categories of safety hazards in the laboratory are given in section F.

The recommendations from "Prudent Practices" have been paraphrased, combined, or otherwise reorganized, and headings have been added. However, their sense has not been changed.

Corresponding Sections of the Standard and this Appendix

The following table is given for the convenience of those who are developing a Chemical Hygiene Plan which will satisfy the requirements of paragraph (e) of the standard. It indicates those sections of this appendix which are most pertinent to each of the sections of paragraph (e) and related paragraphs.

Paragraph and topic in laboratory standard	Relevant appendix section
(e)(3)(i) Standard operating procedures for handling toxic chemicals.	C, D, E
(e)(3)(ii) Criteria to be used for implementation of measures to reduce exposures.	D
(e)(3)(iii) Fume hood performance.	C4b
(e)(3)(iv) Employee information and training (including emergency procedures).	D10, D9
(e)(3)(v) Requirements for prior approval of laboratory activities.	E2b, E4b
(e)(3)(vi) Medical consultation and medical examinations.	D5, E4f
(e)(3)(vii) Chemical hygiene responsibilities.	B
(e)(3)(viii) Special precautions for work with particularly hazardous substances.	E2, E3, E4

In this appendix, those recommendations directed primarily at administrators and supervisors are given in sections A–D. Those recommendations of primary concern to employees who are actually handling laboratory chemicals are given in section E. (Reference to page numbers in "Prudent Practices" are given in parentheses.)

A. General Principles for Work with Laboratory Chemicals

In addition to the more detailed recommendations listed below in sections B–E, "Prudent Practices" expresses certain general principles, including the following:

1. *It is prudent to minimize all chemical exposures.* Because few laboratory chemicals are without hazards, general precautions for handling all laboratory chemicals should be adopted, rather than specific guidelines for particular chemicals (2, 10). Skin contact with chemicals should be avoided as a cardinal rule (198).

2. *Avoid underestimation of risk.* Even for substances of no known significant hazard, exposure should be minimized; for work with substances which present special hazards, special precautions should be taken (10, 37, 38). One should assume that any mixture will be more toxic than its most toxic component (30, 103) and that all substances of unknown toxicity are toxic (3, 34).

3. *Provide adequate ventilation.* The best way to prevent exposure to airborne substances is to prevent their escape into the working atmosphere by use of hoods and other ventilation devices (32, 198).

4. *Institute a chemical hygiene program.* A mandatory chemical hygiene program designed to minimize exposures is needed; it should be a regular, continuing effort, not merely a standby or short-term activity (6, 11). Its recommendations should be followed in academic teaching laboratories as well as by full-time laboratory workers (13).

5. *Observe the PELs, TLVs.* The Permissible Exposure Limits of OSHA and the Threshold Limit Values of the American Conference of Governmental Industrial Hygienists should not be exceeded (13).

B. Chemical Hygiene Responsibilities

Responsibility for chemical hygiene rests at all levels (6, 11, 21) including the:

1. *Chief executive officer,* who has ultimate responsibility for chemical hygiene within the institution and must, with other administrators, provide continuing support for institutional chemical hygiene (7, 11).

2. *Supervisor of the department or other administrative unit,* who is responsible for chemical hygiene in that unit (7).

3. *Chemical hygiene officer(s),* whose appointment is essential (7) and who must:

(a) Work with administrators and other employees to develop and implement appropriate chemical hygiene policies and practices (7);

(b) Monitor procurement, use, and disposal of chemicals used in the lab (8);

(c) See that appropriate audits are maintained (8);

(d) Help project directors develop precautions and adequate facilities (10);

(e) Know the current legal requirements concerning regulated substances (50); and

(f) Seek ways to improve the chemical hygiene program (8, 11).

4. *Laboratory supervisor,* who has overall responsibility for chemical hygiene in the laboratory (21) including responsibility to:

(a) Ensure that workers know and follow the chemical hygiene rules, that protective equipment is available and in working order, and that appropriate training has been provided (21, 22);

(b) Provide regular, formal chemical hygiene and housekeeping inspections including routine inspections of emergency equipment (21, 171);

(c) Know the current legal requirements concerning regulated substances (50, 231);

(d) Determine the required levels of protective apparel and equipment (156, 160, 162); and

(e) Ensure that facilities and training for use of any material being ordered are adequate (215).

5. *Project director or director of other specific operation*, who has primary responsibility for chemical hygiene procedures for that operation (7).

6. *Laboratory worker*, who is responsible for:

(a) Planning and conducting each operation in accordance with the institutional chemical hygiene procedures (7, 21, 22, 230); and

(b) Developing good personal chemical hygiene habits (22).

C. The Laboratory Facility

1. *Design*. The laboratory facility should have:

(a) An appropriate general ventilation system (see C4 below) with air intakes and exhausts located so as to avoid intake of contaminated air (194);

(b) Adequate, well-ventilated stockrooms/storerooms (218, 219);

(c) Laboratory hoods and sinks (12, 162);

(d) Other safety equipment including eyewash fountains and drench showers (162, 169); and

(e) Arrangements for waste disposal (12, 240).

2. *Maintenance*. Chemical-hygiene-related equipment (hoods, incinerator, etc.) should undergo continuing appraisal and be modified if inadequate (11, 12).

3. *Usage*. The work conducted (10) and its scale (12) must be appropriate to the physicial facilities available and, especially, to the quality of ventilation (13).

4. *Ventilation*—(a) *General laboratory ventilation*. This system should: Provide a source of air for breathing and for input to local ventilation devices (199); it should not be relied on for protection from toxic substances released into the laboratory (198); ensure that laboratory air is continually replaced, preventing increase of air concentrations of toxic substances during the working day (194); direct air flow into the laboratory from non-laboratory areas and out to the exterior of the building (194).

(b) *Hoods*. A laboratory hood with 2.5 linear feet of hood space per person should be provided for every 2 workers if they spend most of their time working with chemicals (199); each hood should have a continuous monitoring device to allow convenient confirmation of adequate hood performance before use (200, 209). If this is not possible, work with substances of unknown toxicity should be avoided (13) or other types of local ventilation devices should be provided (199). See pp. 201–206 for a discussion of hood design, construction, and evaluation.

(c) *Other local ventilation devices*. Ventilated storage cabinets, canopy hoods, snorkels, etc. should be provided as needed (199). Each canopy hood and snorkel should have a separate exhaust duct (207).

(d) *Special ventilation areas*. Exhaust air from glove boxes and isolation rooms should be passed through scrubbers or other treatment before release into the regular exhaust system (208). Cold rooms and warm rooms should have provisions for rapid escape and for escape in the event of electrical failure (209).

(e) *Modifications*. Any alteration of the ventilation system should be made only if thorough testing indicates that worker protection from airborne toxic substances will continue to be adequate (12, 193, 204).

(f) *Performance*. Rate: 4–12 room air changes/hour is normally adequate general ventilation if local exhaust systems such as hoods are used as the primary method of control (194).

(g) *Quality*. General air flow should not be turbulent and should be relatively uniform throughout the laboratory, with no high velocity or static areas (194, 195); airflow into and within the hood should not be excessively turbulent (200); hood face velocity should be adequate (typically 60–100 lfm) (200, 204).

(h) *Evaluation*. Quality and quantity of ventilation should be evaluated on installation (202), regularly monitored (at least every 3 months) (6, 12, 14, 195), and reevaluated whenever a change in local ventilation devices is made (12, 195, 207). See pp. 195–198 for methods of evaluation and for calculation of estimated airborne contaminant concentrations.

D. Components of the Chemical Hygiene Plan

1. Basic Rules and Procedures (Recommendations for these are given in section E, below)

2. Chemical Procurement, Distribution, and Storage

(a) *Procurement*. Before a substance is received, information on proper handling, storage, and disposal should be known to those who will be involved (215, 216). No container should be accepted without an adequate identifying label (216). Preferably, all substances should be received in a central location (216).

(b) *Stockrooms/storerooms*. Toxic substances should be segregated in a well-identified area with local exhaust ventilation (221). Chemicals which are highly toxic (227) or other chemicals whose containers have been opened should be in unbreakable secondary containers (219). Stored chemicals should be examined periodically (at least annually) for replacement, deterioration, and container integrity (218–19).

Stockrooms/storerooms should not be used as preparation or repackaging areas, should be open during normal working hours, and should be controlled by one person (219).

(c) *Distribution*. When chemicals are hand carried, the container should be placed in an outside container or bucket. Freight-only elevators should be used if possible (223).

(d) *Laboratory storage*. Amounts permitted should be as small as practical. Storage on bench tops and in hoods is inadvisable. Exposure to heat or direct sunlight should be avoided. Periodic inventories should be conducted, with unneeded items being discarded or returned to the storeroom/stockroom (225–6, 229).

3. Environmental Monitoring

Regular instrumental monitoring of airborne concentrations is not usually justified or practical in laboratories but may be appropriate when testing or redesigning hoods or other ventilation devices (12) or when a highly toxic substance is stored or used regularly (e.g., 3 times/week) (13).

4. Housekeeping, Maintenance, and Inspections

(a) Cleaning. Floors should be cleaned regularly (24).

(b) Inspections. Formal housekeeping and chemical hygiene inspections should be held at least quarterly (6, 21) for units which have frequent pesonnel changes and semiannually for others; informal inspections should be continual (21).

(c) *Maintenance*. Eye wash fountains should be inspected at intervals of not less than 3 months (6). Respirators for routine use should be inspected periodically by the laboratory supervisor (169). Safety showers should be tested routinely (169). Other safety equipment should be inspected regularly. (*e.g.*, every 3–6 months) (6, 24, 171). Procedures to prevent restarting of out-of-service equipment should be established (25).

(d) *Passageways*. Stairways and hallways should not be used as storage areas (24). Access to exits, emergency equipment, and utility controls should never be blocked (24).

5. Medical Program

(a) *Compliance with regulations*. Regular medical surveillance should be established to the extent required by regulations (12).

(b) *Routine surveillance*. Anyone whose work involves regular and frequent handling of toxicologically significant quantities of a chemical should consult a qualified physician to determine on an individual basis whether a regular schedule of medical surveillance is desirable (11, 50).

(c) *First aid*. Personnel trained in first aid should be available during working hours and an emergency room with medical personnel should be nearby (173). See pp. 176–178 for description of some emergency first aid procedures.

6. Protective Apparel and Equipment

These should include for each laboratory:

(a) Protective apparel compatible with the required degree of protection for substances being handled (158–161);

(b) An easily accessible drench-type safety shower (162, 169);

(c) An eyewash fountain (162);

(d) A fire extinguisher (162–164);

(e) Respiratory protection (164–9), fire alarm and telephone for emergency use (162) should be available nearby; and

(f) Other items designated by the laboratory supervisor (156, 160).

7. Records

(a) Accident records should be written and retained (174).

(b) Chemical Hygiene Plan records should document that the facilities and precautions were compatible with current knowledge and regulations (7).

(c) Inventory and usage records for high-risk substances should be kept as specified in sections E3e below.

(d) Medical records should be retained by the institution in accordance with the requirements of state and federal regulations (12).

8. Signs and Labels

Prominent signs and labels of the following types should be posted:

(a) Emergency telephone numbers of emergency personnel/facilities, supervisors, and laboratory workers (28);

(b) Identity labels, showing contents of containers (including waste receptacles) and associated hazards (27, 48);

(c) Location signs for safety showers, eyewash stations, other safety and first aid equipment, exits (27) and areas where food and beverage consumption and storage are permitted (24); and

(d) Warnings at areas or equipment where special or unusual hazards exist (27).

9. Spills and Accidents

(a) A written emergency plan should be established and communicated to all personnel; it should include procedures for ventilation failure (200), evacuation, medical care, reporting, and drills (172).

(b) There should be an alarm system to alert people in all parts of the facility including isolation areas such as cold rooms (172).

(c) A spill control policy should be developed and should include consideration of prevention, containment, cleanup, and reporting (175).

(d) All accidents or near accidents should be carefully analyzed with the results distributed to all who might benefit (8, 28).

10. Information and Training Program

(a) Aim: To assure that all individuals at risk are adequately informed about the work in the laboratory, its risks, and what to do if an accident occurs (5, 15).

(b) Emergency and Personal Protection Training: Every laboratory worker should know the location and proper use of available protective apparel and equipment (154, 169).

Some of the full-time personnel of the laboratory should be trained in the proper use of emergency equipment and procedures (6).

Such training as well as first aid instruction should be available to (154) and encouraged for (176) everyone who might need it.

(c) Receiving and stockroom/storeroom personnel should know about hazards, handling equipment, protective apparel, and relevant regulations (217).

(d) Frequency of Training: The training and education program should be a regular, continuing activity—not simply an annual presentation (15).

(e) Literature/Consultation: Literature and consulting advice concerning chemical hygiene should be readily available to laboratory personnel, who should be encouraged to use these information resources (14).

11. *Waste Disposal Program.*

(a) Aim: To assure that minimal harm to people, other organisms, and the environment will result from the disposal of waste laboratory chemicals (5).

(b) Content (14, 232, 233, 240): The waste disposal program should specify how waste is to be collected, segregated, stored, and transported and include consideration of what materials can be incinerated. Transport from the institution must be in accordance with DOT regulations (244).

(c) Discarding Chemical Stocks: Unlabeled containers of chemicals and solutions should undergo prompt disposal; if partially used, they should not be opened (24, 27).

Before a worker's employment in the laboratory ends, chemicals for which that person was responsible should be discarded or returned to storage (226).

(d) Frequency of Disposal: Waste should be removed from laboratories to a central waste storage area at least once per week and from the central waste storage area at regular intervals (14).

(e) Method of Disposal: Incineration in an environmentally acceptable manner is the most practical disposal method for combustible laboratory waste (14, 238, 241).

Indiscriminate disposal by pouring waste chemicals down the drain (14, 231, 242) or adding them to mixed refuse for landfill burial is unacceptable (14).

Hoods should not be used as a means of disposal for volatile chemicals (40, 200).

Disposal by recycling (233, 243) or chemical decontamination (40, 230) should be used when possible.

E. Basic Rules and Procedures for Working with Chemicals

The Chemical Hygiene Plan should require that laboratory workers know and follow its rules and procedures. In addition to the procedures of the sub programs mentioned above, these should include the rules listed below.

1. General Rules

The following should be used for essentially all laboratory work with chemicals:

(a) *Accidents and spills*—Eye Contact: Promptly flush eyes with water for a prolonged period (15 minutes) and seek medical attention (33, 172).

Ingestion: Encourage the victim to drink large amounts of water (178).

Skin Contact: Promptly flush the affected area with water (33, 172, 178) and remove any contaminated clothing (172, 178). If symptoms persist after washing, seek medical attention (33).

Clean-up. Promptly clean up spills, using appropriate protective apparel and equipment and proper disposal (24 33). See pp. 233–237 for specific clean-up recommendations.

(b) *Avoidance of "routine" exposure:* Develop and encourage safe habits (23); avoid unnecessary exposure to chemicals by any route (23);

Do not smell or taste chemicals (32). Vent apparatus which may discharge toxic chemicals (vacuum pumps, distillation columns, etc.) into local exhaust devices (199).

Inspect gloves (157) and test glove boxes (208) before use.

Do not allow release of toxic substances in cold rooms and warm rooms, since these have contained recirculated atmospheres (209).

(c) *Choice of chemicals:* Use only those chemicals for which the quality of the available ventilation system is appropriate (13).

(d) *Eating, smoking, etc.:* Avoid eating, drinking, smoking, gum chewing, or application of cosmetics in areas where laboratory chemicals are present (22, 24, 32, 40); wash hands before conducting these activities (23, 24).

Avoid storage, handling or consumption of food or beverages in storage areas, refrigerators, glassware or utensils which are also used for laboratory operations (23, 24, 226).

(e) *Equipment and glassware:* Handle and store laboratory glassware with care to avoid damage; do not use damaged glassware (25). Use extra care with Dewar flasks and other evacuated glass apparatus; shield or wrap them to contain chemicals and fragments should implosion occur (25). Use equipment only for its designed purpose (23, 26).

(f) *Exiting:* Wash areas of exposed skin well before leaving the laboratory (23).

(g) *Horseplay:* Avoid practical jokes or other behavior which might confuse, startle or distract another worker (23).

(h) *Mouth suction:* Do not use mouth suction for pipeting or starting a siphon (23, 32).

(i) *Personal apparel:* Confine long hair and loose clothing (23, 158). Wear shoes at all times in the laboratory but do not wear sandals, perforated shoes, or sneakers (158).

(j) *Personal housekeeping:* Keep the work area clean and uncluttered, with chemicals and equipment being properly labeled and stored; clean up the work area on completion of an operation or at the end of each day (24).

(k) *Personal protection:* Assure that appropriate eye protection (154–156) is worn by all persons, including visitors, where chemicals are stored or handled (22, 23, 33, 154).

Wear appropriate gloves when the potential for contact with toxic materials exists (157); inspect the gloves before each use, wash them before removal, and replace them periodically (157). (A table of resistance to chemicals of common glove materials is given p. 159).

Use appropriate (164–168) respiratory equipment when air contaminant concentrations are not sufficiently restricted by engineering controls (164–5), inspecting the respirator before use (169).

Use any other protective and emergency apparel and equipment as appropriate (22, 157–162).

Avoid use of contact lenses in the laboratory unless necessary; if they are used, inform supervisor so special precautions can be taken (155).

Remove laboratory coats immediately on significant contamination (161).

(l) *Planning:* Seek information and advice about hazards (7), plan appropriate protective procedures, and plan positioning of equipment before beginning any new operation (22, 23).

(m) *Unattended operations:* Leave lights on, place an appropriate sign on the door, and provide for containment of toxic substances in the event of failure of a utility service (such as cooling water) to an unattended operation (27, 128).

(n) *Use of hood:* Use the hood for operations which might result in release of toxic chemical vapors or dust (198–9).

As a rule of thumb, use a hood or other local ventilation device when working with any appreciably volatile substance with a TLV of less than 50 ppm (13).

Confirm adequate hood performance before use; keep hood closed at all times except when adjustments within the hood are being made (200); keep materials stored in hoods to a minimum and do not allow them to block vents or air flow (200).

Leave the hood "on" when it is not in active use if toxic substances are stored in it

or if it is uncertain whether adequate general laboratory ventilation will be maintained when it is "off" (200).

(o) *Vigilance:* Be alert to unsafe conditions and see that they are corrected when detected (22).

(p) *Waste disposal:* Assure that the plan for each laboratory operation includes plans and training for waste disposal (230).

Deposit chemical waste in appropriately labeled receptacles and follow all other waste disposal procedures of the Chemical Hygiene Plan (22, 24).

Do not discharge to the sewer concentrated acids or bases (231); highly toxic, malodorous, or lachrymatory substances (231); or any substances which might interfere with the biological activity of waste water treatment plants, create fire or explosion hazards, cause structural damage or obstruct flow (242).

(q) *Working alone:* Avoid working alone in a building; do not work alone in a laboratory if the procedures being conducted are hazardous (28).

2. Working with Allergens and Embryotoxins

(a) *Allergens* (examples: diazomethane, isocyanates, bichromates): Wear suitable gloves to prevent hand contact with allergens or substances of unknown allergenic activity (35).

(b) *Embryotoxins* (34–5) (examples: organomercurials, lead compounds, formamide): If you are a woman of childbearing age, handle these substances only in a hood whose satisfactory performance has been confirmed, using appropriate protective apparel (especially gloves) to prevent skin contact.

Review each use of these materials with the research supervisor and review continuing uses annually or whenever a procedural change is made.

Store these substances, properly labeled, in an adequately ventilated area in an unbreakable secondary container.

Notify supervisors of all incidents of exposure or spills; consult a qualified physician when appropriate.

3. Work with Chemicals of Moderate Chronic or High Acute Toxicity

Examples: diisopropylflurophosphate (41), hydrofluoric acid (43), hydrogen cyanide (45).

Supplemental rules to be followed in addition to those mentioned above (Procedure B of "Prudent Practices", pp. 39–41):

(a) *Aim:* To minimize exposure to these toxic substances by any route using all reasonable precautions (39).

(b) *Applicability:* These precautions are appropriate for substances with moderate chronic or high acute toxicity used in significant quantities (39).

(c) *Location:* Use and store these substances only in areas of restricted access with special warning signs (40, 229).

Always use a hood (previously evaluated to confirm adequate performance with a face velocity of at least 60 linear feet per minute) (40) or other containment device for procedures which may result in the generation of aerosols or vapors containing the substance (39); trap released vapors to prevent their discharge with the hood exhaust (40).

(d) *Personal protection:* Always avoid skin contact by use of gloves and long sleeves (and other protective apparel as appropriate) (39). Always wash hands and arms immediately after working with these materials (40).

(e) *Records:* Maintain records of the amounts of these materials on hand, amounts used, and the names of the workers involved (40, 229).

(f) *Prevention of spills and accidents:* Be prepared for accidents and spills (41).

Assure that at least 2 people are present at all times if a compound in use is highly toxic or of unknown toxicity (39).

Store breakable containers of these substances in chemically resistant trays; also work and mount apparatus above such trays or cover work and storage surfaces with removable, absorbent, plastic backed paper (40).

If a major spill occurs outside the hood, evacuate the area; assure that cleanup personnel wear suitable protective apparel and equipment (41).

(g) *Waste:* Thoroughly decontaminate or incinerate contaminated clothing or shoes (41). If possible, chemically decontaminate by chemical conversion (40).

Store contaminated waste in closed, suitably labeled, impervious containers (for liquids, in glass or plastic bottles half-filled with vermiculite) (40).

4. Work with Chemicals of High Chronic Toxicity

(Examples: dimethylmercury and nickel carbonyl (48), benzo-a-pyrene (51), N-nitrosodiethylamine (54), other human carcinogens or substances with high carcinogenic potency in animals (38).)

Further supplemental rules to be followed, in addition to all these mentioned above, for work with substances of known high chronic toxicity (in quantities above a few milligrams to a few grams, depending on the substance) (47). (Procedure A of "Prudent Practices" pp. 47–50).

(a) *Access:* Conduct all transfers and work with these substances in a "controlled area": a restricted access hood, glove box, or portion of a lab, designated for use of highly toxic substances, for which all people with access are aware of the substances being used and necessary precautions (48).

(b) *Approvals:* Prepare a plan for use and disposal of these materials and obtain the approval of the laboratory supervisor (48).

(c) *Non-contamination/Decontamination:* Protect vacuum pumps against contamination by scrubbers or HEPA filters and vent them into the hood (49). Decontaminate vacuum pumps or other contaminated equipment, including glassware, in the hood before removing them from the controlled area (49, 50).

Decontaminate the controlled area before normal work is resumed there (50).

(d) *Exiting:* On leaving a controlled area, remove any protective apparel (placing it in an appropriate, labeled container) and thoroughly wash hands, forearms, face, and neck (49).

(e) *Housekeeping:* Use a wet mop or a vacuum cleaner equipped with a HEPA filter instead of dry sweeping if the toxic substance was a dry powder (50).

(f) *Medical surveillance:* If using toxicologically significant quantities of such a substance on a regular basis (*e.g.*, 3 times per week), consult a qualified physician concerning desirability of regular medical surveillance (50).

(g) *Records:* Keep accurate records of the amounts of these substances stored (229) and used, the dates of use, and names of users (48).

(h) *Signs and labels:* Assure that the controlled area is conspicuously marked with warning and restricted access signs (49) and that all containers of these substances are appropriately labeled with identity and warning labels (48).

(i) *Spills:* Assure that contingency plans, equipment, and materials to minimize exposures of people and property in case of accident are available (233–4).

(j) *Storage:* Store containers of these chemicals only in a ventilated, limited access (48, 227, 229) area in appropriately labeled, unbreakable, chemically resistant, secondary containers (48, 229).

(k) *Glove boxes:* For a negative pressure glove box, ventilation rate must be at least 2 volume changes/hour and pressure at least 0.5 inches of water (48). For a positive pressure glove box, thoroughly check for leaks before each use (49). In either case, trap the exit gases or filter them through a HEPA filter and then release them into the hood (49).

(l) *Waste:* Use chemical decontamination whenever possible; ensure that containers of contaminated waste (including washings from contaminated flasks) are transferred from the controlled area in a secondary container under the supervision of authorized personnel (49, 50, 233).

5. Animal Work with Chemicals of High Chronic Toxicity

(a) *Access:* For large scale studies, special facilities with restricted access are preferable (56).

(b) *Administration of the toxic substance:* When possible, administer the substance by injection or gavage instead of in the diet. If administration is in the diet, use a caging system under negative pressure or under laminar air flow directed toward HEPA filters (56).

(c) *Aerosol suppression:* Devise procedures which minimize formation and dispersal of contaminated aerosols, including those from food, urine, and feces (e.g., use HEPA filtered vacuum equipment for cleaning, moisten contaminated bedding before removal from the cage, mix diets in closed containers in a hood) (55, 56).

(d) *Personal protection:* When working in the animal room, wear plastic or rubber gloves, fully buttoned laboratory coat or jumpsuit and, if needed because of incomplete suppression of aerosols, other apparel and equipment (shoe and head coverings, respirator) (56).

(e) *Waste disposal:* Dispose of contaminated animal tissues and excreta by incineration if the available incinerator can convert the contaminant to non-toxic products (238); otherwise, package the waste appropriately for burial in an EPA-approved site (239).

F. Safety Recommendations

The above recommendations from "Prudent Practices" do not include those which are directed primarily toward

prevention of physical injury rather than toxic exposure. However, failure of precautions against injury will often have the secondary effect of causing toxic exposures. Therefore, we list below page references for recommendations concerning some of the major categories of safety hazards which also have implications for chemical hygiene:

1. Corrosive agents: (35–6)
2. Electrically powered laboratory apparatus: (179–92)
3. Fires, explosions: (26, 57–74, 162–4, 174–5, 219–20, 226–7)
4. Low temperature procedures: (26, 88)
5. Pressurized and vacuum operations (including use of compressed gas cylinders): (27, 75–101)

G. Material Safety Data Sheets

Material safety data sheets are presented in "Prudent Practices" for the chemicals listed below. (Asterisks denote that comprehensive material safety data sheets are provided).

*Acetyl peroxide (105)
*Acrolein (106)
*Acrylonilrile (107)
Ammonia (anhydrous) (91)
*Aniline (109)
*Benzene (110)
*Benzo[a]pyrene (112)
*Bis(chloromethyl) ether (113)
Boron trichloride (91)
Boron trifluoride (92)
Bromine (114)
*Tert-butyl hydroperoxide (148)
*Carbon disulfide (116)
Carbon monoxide (92)
*Carbon tetrachloride (118)
*Chlorine (119)
Chlorine trifluoride (94)
*Chloroform (121)
Chloromethane (93)
*Diethyl ether (122)
Diisopropyl fluorophosphate (41)
*Dimethylformamide (123)
*Dimethyl sulfate (125)
*Dioxane (126)
*Ethylene dibromide (128)
*Fluorine (95)
*Formaldehyde (130)
*Hydrazine and salts (132)
Hydrofluoric acid (43)
Hydrogen bromide (98)
Hydrogen chloride (98)
*Hydrogen cyanide (133)
*Hydrogen sulfide (135)
Mercury and compounds (52)
*Methanol (137)
*Morpholine (138)
*Nickel carbonyl (99)
*Nitrobenzene (139)
Nitrogen dioxide (100)
N-nitrosodiethylamine (54)
*Peracetic acid (141)
*Phenol (142)
*Phosgene (143)
*Pyridine (144)
*Sodium azide (145)
*Sodium cyanide (147)
Sulfur dioxide (101)
*Trichloroethylene (149)
*Vinyl chloride (150)

Appendix B to § 1915.1450—References (Non-Mandatory)

The following references are provided to assist the employer in the development of a Chemical Hygiene Plan. The materials listed below are offered as non-mandatory guidance. References listed here do not imply specific endorsement of a book, opinion, technique, policy or a specific solution for a safety or health problem. Other references not listed here may better meet the needs of a specific laboratory. (a) Materials for the development of the Chemical Hygiene Plan:

1. American Chemical Society, Safety in Academic Chemistry Laboratories, 4th edition, 1985.

2. Fawcett, H.H. and W. S. Wood, Safety and Accident Prevention in Chemical Operations, 2nd edition, Wiley-Interscience, New York, 1982.

3. Flury, Patricia A., Environmental Health and Safety in the Hospital Laboratory, Charles C. Thomas Publisher, Springfield IL, 1978.

4. Green, Michael E. and Turk, Amos, Safety in Working with Chemicals, Macmillan Publishing Co., NY, 1978.

5. Kaufman, James A., Laboratory Safety Guidelines, Dow Chemical Co., Box 1713, Midland, MI 48640, 1977.

6. National Institutes of Health, NIH Guidelines for the Laboratory use of Chemical Carcinogens, NIH Pub. No. 81–2385, GPO, Washington, DC 20402, 1981.

7. National Research Council, Prudent Practices for Disposal of Chemicals from Laboratories, National Academy Press, Washington, DC, 1983.

8. National Research Council, Prudent Practices for Handling Hazardous Chemicals in Laboratories, National Academy Press, Washington, DC, 1981.

9. Renfrew, Malcolm, Ed., Safety in the Chemical Laboratory, Vol. IV, *J. Chem. Ed.*, American Chemical Society, Easlon, PA, 1981.

10. Steere, Norman V., Ed., Safety in the Chemical Laboratory, *J. Chem. Ed.* American Chemical Society, Easlon, PA, 18042, Vol. I, 1967, Vol. II, 1971, Vol. III 1974.

11. Steere, Norman V., Handbook of Laboratory Safety, the Chemical Rubber Company Cleveland, OH, 1971.

12. Young, Jay A., Ed., Improving Safety in the Chemical Laboratory, John Wiley & Sons, Inc. New York, 1987.

(b) Hazardous Substances Information:

1. American Conference of Governmental Industrial Hygienists, Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment with Intended Changes, 6500 Glenway Avenue, Bldg. D–7 Cincinnati, OH 45211–4438 (latest edition).

2. Annual Report on Carcinogens, National Toxicology Program U.S. Department of Health and Human Services, Public Health Service, U.S. Government Printing Office, Washington, DC, (latest edition).

3. Best Company, Best Safety Directory, Vols. I and II, Oldwick, N.J., 1981.

4. Bretherick, L., Handbook of Reactive Chemical Hazards, 2nd edition, Butterworths, London, 1979.

5. Bretherick, L., Hazards in the Chemical Laboratory, 3rd edition, Royal Society of Chemistry, London, 1986.

6. Code of Federal Regulations, 29 CFR part 1910 subpart Z. U.S. Govt. Printing Office, Washington, DC 20402 (latest edition).

7. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, World Health Organization Publications Center, 49 Sheridan Avenue, Albany, New York 12210 (latest editions).

8. NIOSH/OSHA Pocket Guide to Chemical Hazards. NIOSH Pub. No. 85–114, U.S. Government Printing Office, Washington, DC, 1985 (or latest edition).

9. Occupational Health Guidelines, NIOSH/OSHA NIOSH Pub. No. 81–123 U.S. Government Printing Office, Washington, DC, 1981.

10. Patty, F.A., Industrial Hygiene and Toxicology, John Wiley & Sons, Inc., New York, NY (Five Volumes).

11. Registry of Toxic Effects of Chemical Substances, U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, Revised Annually, for sale from Superintendent of Documents U.S. Govt. Printing Office, Washington, DC 20402.

12. The Merck Index: An Encyclopedia of Chemicals and Drugs. Merck and Company Inc. Rahway, N.J., 1976 (or latest edition).

13. Sax, N.I. Dangerous Properties of Industrial Materials, 5th edition, Van Nostrand Reinhold, NY., 1979.

14. Sittig, Marshall, Handbook of Toxic and Hazardous Chemicals, Noyes Publications, Park Ridge, NJ, 1981.

(c) Information on Ventilation:

1. American Conference of Governmental Industrial Hygienists Industrial Ventilation (latest edition), 6500 Glenway Avenue, Bldg. D–7, Cincinnati, Ohio 45211–4438.

2. American National Standards Institute, Inc. American National Standards Fundamentals Governing the Design and Operation of Local Exhaust Systems ANSI Z 9.2–1979 American National Standards Institute, N.Y. 1979.

3. Imad, A.P. and Watson, C.L. Ventilation Index: An Easy Way to Decide about Hazardous Liquids, Professional Safety pp 15–18, April 1980.

4. National Fire Protection Association, Fire Protection for Laboratories Using Chemicals NFPA–45, 1982.

Safety Standard for Laboratories in Health Related Institutions, NFPA, 56c, 1980.

Fire Protection Guide on Hazardous Materials, 7th edition, 1978.

National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

5. Scientific Apparatus Makers Association (SAMA), Standard for Laboratory Fume Hoods, SAMA LF7–1980, 1101 16th Street, NW., Washington, DC 20036.

(d) Information on Availability of Referenced Material:

1. American National Standards Institute (ANSI), 1430 Broadway, New York, NY 10018.

2. American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

(Approved by the Office of Management and Budget under control number 1218–0131)

[FR Doc. 93–15301; Filed 6–30–93; 8:45 am]

BILLING CODE 4510–26–P

federal register

Thursday
July 1, 1993

Part III

Department of Education

Centers for Independent Living; Notice Inviting Applications and Final Distribution of Funds, Selection Criteria, and Absolute Funding Priority

DEPARTMENT OF EDUCATION

Centers for Independent Living

AGENCY: Department of Education.

ACTION: Notice of Final Distribution of Funds, Selection Criteria, and Absolute Funding Priority for Fiscal Year (FY) 1993.

SUMMARY: For FY 1993, the Secretary establishes a method of distributing funds, selection criteria for making new awards, and an absolute funding priority under the Centers for Independent Living program. The absolute funding priority supports the operation of centers for independent living in geographic areas within each State that are not currently being served or are underserved by centers for independent living.

EFFECTIVE DATE: This priority takes effect either August 16, 1993, or later if the Congress takes certain adjournments. If you want to know the effective date of this priority, call or write the Department of Education contact person.

FOR FURTHER INFORMATION CONTACT: John Nelson, U.S. Department of Education, 400 Maryland Avenue, SW., room 3326, Switzer Building, Washington, DC 20202–2741. Telephone: (202) 205–9362. Individuals who use a telecommunications device for the deaf (TDD) may call the TDD number at (202) 205–9362.

SUPPLEMENTARY INFORMATION: For FY 1993, grants under the Centers for Independent Living program are authorized by section 721(e)(2) of the Rehabilitation Act of 1973 (Act), as amended. This program provides support for the planning, operation, conduct, administration, and evaluation of centers for independent living (CILs) that comply with the standards and assurances in section 725 of the Act. Centers for independent living are consumer-controlled, community-based, cross-disability, nonresidential private nonprofit agencies that are designed and operated within a local community by individuals with disabilities and provide an array of independent living services.

In FY 1992, the program supported projects in all 50 States, the District of Columbia, Puerto Rico, and American Samoa. The Department has not conducted a major competition for this program since 1982 due to congressional requirements. The Rehabilitation Act Amendments of 1992 (1992 Amendments), which were enacted October 29, 1992, substantially changed this program. The 1992 Amendments provide that FY 1993 is a transition year for determining how funds are distributed under this program. For FY 1993, the Secretary implements a number of funding and program changes made by the 1992 Amendments in a manner that provides the least disruption to the program and provides for the greatest continuity of independent living services to persons with severe disabilities.

Section 721(e)(2)(B)(i) of the Act requires that funds appropriated for this program are to be distributed in FY 1993 to private nonprofit agencies (PNAs) that received funding directly or through subgrants or contracts under part B of title VII of the Act, as in effect on October 28, 1992, the day before the date of enactment of the 1992 Amendments, in FY 1992, if the PNA submits an application to the Secretary that demonstrates the PNA will meet the evaluation standards described in section 725(b) of the Act no later than October 1, 1993, and that contains the assurances described in section 725(c) of the Act.

Pursuant to section 721(e)(2)(C), the Secretary may award funds in FY 1993 under this program to a PNA that did not receive assistance under part B, as in effect on October 28, 1992, in FY 1992, only after funding all PNAs pursuant to section 721(e)(2)(B)(i) and only if the PNA that did not previously receive assistance has submitted a satisfactory application. The Secretary will use the selection criteria that are specified in section 722(d)(2)(B) of the Act for the selection of centers pursuant to section 721(e)(2)(B)(ii) of the Act.

Section 721(c)(1) of the Act provides that the allocation of funds under this program in FY 1994 is to be made on the basis of the ratio of the population of a State to the population of all States. Section 721(c)(1)(B) and (C) of the Act also establishes certain minimums that are to apply to the award of FY 1994 funds under this program.

The minimums established by section 721(c)(1)(B) and (C) for FY 1994 and for each subsequent year are as follows:

(a) Subject to the availability of appropriations for part C of chapter 1 of title VII, the amount of any allotment to a State under section 721(c)(1)(A) for a fiscal year must not be less than the amount of financial assistance received by CILs in the State for FY 1992 under part B of title VII, as in effect on October 28, 1992.

(b) Subject to the availability of appropriations for Part C of Chapter 1 of Title VII and except as provided in section 721(c)(1)(B) of the Act, for a fiscal year in which the amounts appropriated to carry out Part C of Chapter 1 of Title VII exceed the amounts appropriated for FY 1992 to carry out Part B of Title VII, as in effect on October 28, 1992—

(1) If the excess is $8,000,000 or more, the allotment to any State under section 721(c)(1)(A) must be not less than $450,000 or one-third of one percent of the sums made available for the fiscal year for which the allotment is made, whichever is greater, and the allotment of any State under section 721 for any fiscal year that is less than $450,000 or one-third of one percent of the sums must be increased to the greater of the two amounts;

(2) If the excess is $4,000,000 or more but less than $8,000,000, the allotment to any State under section 721(c)(1)(A) must be not less than $400,000 or one-third of one percent of the sums made available for the fiscal year for which the allotment is made, whichever is greater, and the allotment of any State under section 721 for any fiscal year that is less than $400,000 or one-third of one percent of the sums must be increased to the greater of the two amounts; and

(3) If the excess is less than $4,000,000, the allotment to any State under section 721(c)(1)(A) must approach, as nearly as possible, the greater of the two amounts described in section 721(c)(1)(C)(ii) of the Act.

Section 721(c)(2) of the Act provides that Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau are to receive a separate allotment of not less than one-eighth of one percent of the remainder for the fiscal year for which the allotment will be made, except that Palau may receive its allotment only until the Compact of Free Association with Palau takes effect.

Pursuant to section 7(16) of the Act, the District of Columbia and Puerto Rico are considered States. Therefore, the District of Columbia and Puerto Rico are eligible to receive their allotment of funds under this program in accordance with section 721(c)(1) of the Act.

Finally, section 721(d) of the Act provides the method by which the Secretary will redistribute to other States any funds that a State received under its allotment but will not expend to carry out Part C of Title VII of the Act in FY 1994 and subsequent years.

This program supports moving the Nation toward achieving the National Educational Goals by enhancing programs that develop the skills of individuals with severe disabilities to exercise the rights and responsibilities of citizenship.

On April 22, 1993 the Secretary published a notice of proposed

distribution of funds, selection criteria, and absolute funding priority for this competition in the **Federal Register** (58 FR 27716).

Note: This notice does not solicit applications. A notice inviting applications under this competition is published in a separate notice in this issue of the **Federal Register**.

Public Comment

In the notice of proposed distribution of funds, selection criteria, and absolute funding priority, the Secretary invited comments. The Secretary did not receive any comments by the end of the comment period of June 10, 1993. Except for minor technical revisions, the Secretary has made no changes in the notice.

Final Distribution of Funds, Selection Criteria, and Absolute Funding Priority

Pursuant to section 12 of the Act and 34 CFR 75.105(c)(3), the Secretary establishes the following method for the distribution of funds, the following selection criteria, and the following absolute funding priority under this program in FY 1993.

Distribution of Funds

The Secretary distributes funds under this program in FY 1993 consistent with the allotment by population and the minimums established by section 721(c)(1), (c)(2), and (d) of the Act for FY 1994 that are described in the supplementary information section of this notice.

Selection Criteria

The Secretary evaluates each application for a new center under this program by using the following selection criteria, which are based on section 722(d)(2)(B) of the Act:

(a) *Evidence of need* (15 points).

(1) The Secretary reviews each application for persuasive evidence that shows the extent to which the project meets the specific needs for the program, including consideration of—

(i) The needs addressed by the project;

(ii) How the applicant identified those needs (i.e., whether from the 1990 census data or other current sources);

(iii) How those needs will be met by the project; and

(iv) The benefits to be gained by meeting those needs.

(2) The Secretary looks for information that shows that the need for the center for independent living has been established based on an assessment of the ability of existing programs and facilities to meet the service needs for independent living services of individuals with severe disabilities in the geographic area to be served.

(b) *Plan of operation* (25 points).

(1) The Secretary reviews each application for information that shows the quality of the plan of operation for the project.

(2) The Secretary looks for information that shows—

(i) High quality in the design of the project;

(ii) An effective plan of management that ensures proper and efficient administration of the project;

(iii) A clear description of how the objectives of the project relate to the purpose of the program;

(iv) The way the applicant plans to use its resources and personnel to achieve each objective;

(v) A clear description of how the applicant will provide equal access and treatment for eligible project participants who are members of groups that have been traditionally underrepresented, such as—

(A) Members of racial or ethnic minority groups;

(B) Women; and

(C) The elderly.

(3) The Secretary reviews each application for information that shows that the applicant plans to devote adequate resources to the project, including funding, facilities, equipment, and supplies.

(c) *Past performance* (5 points).

(1) The Secretary reviews each application for information that shows the past performance of the applicant in successfully providing services similar to independent living services.

(2) The Secretary looks for information that shows evidence that the applicant successfully provided services comparable to independent living services and core services as listed in section 7(30) of the Act and other services that empower individuals with severe disabilities.

(d) *Quality of key personnel* (10 points).

(1) The Secretary reviews each application for information that shows the qualifications of the key personnel the applicant plans to use on the project.

(2) The Secretary looks for information that shows—

(i) The qualifications of the project director;

(ii) The qualifications of each of the other management and decisionmaking personnel to be used in the project;

(iii) The time that each person referred to in paragraphs (2)(i) and (ii) of this criterion will commit to the project; and

(iv) The extent to which the applicant, as part of its nondiscriminatory employment practices, encourages applications for employment from persons who are members of groups that have been traditionally underrepresented, such as—

(A) Members of racial or ethnic minority groups;

(B) Women;

(C) Persons with disabilities; and

(D) The elderly.

(3) To determine personnel qualifications, the Secretary considers experience and training in fields related to the objectives of the project, as well as other information that the applicant provides.

(e) *Involvement of individuals with severe disabilities* (5 points).

(1) The Secretary reviews each application for information that shows that persons with severe disabilities are appropriately involved in conducting center activities.

(2) The Secretary looks for information that shows that persons with severe disabilities or their parents, guardians, or other representatives, as appropriate, will be substantially involved in planning, policy direction, and management of the center, and, to the greatest extent possible, will be employed by the center.

(f) *Budget and cost effectiveness* (10 points).

(1) The Secretary reviews each application for information that shows that the project has an adequate budget and is cost effective.

(2) The Secretary looks for information that shows—

(i) The budget for the project is adequate to support the project activities; and

(ii) Costs are reasonable in relation to the objectives of the project.

(g) *Evaluation plan* (5 points).

(1) The Secretary reviews each application for information that shows the quality of the evaluation plan for the project.

(2) The Secretary looks for information that shows methods of evaluation that are appropriate for the project and, to the extent possible, are objective and produce data that are quantifiable.

(h) *Meeting the standards and the assurances* (25 points).

The Secretary reviews each application for information that shows—

(1) Evidence of demonstrated success in satisfying, or a clearly defined plan to satisfy, the standards in section 725(b) of the Act by October 1, 1993; and

(2) Convincing evidence of demonstrated success in satisfying, or a

clearly defined plan to satisfy, the assurances in section 725(c) of the Act by October 1, 1993. (Approved by the Office of Management and Budget under control number 1820–0018.)

Absolute Funding Priority

With the funds available to implement section 721(e)(2) (B)(ii) and (C) of the Act in FY 1993, the Secretary also establishes an absolute funding priority for eligible PNAs that propose to serve geographic areas within each State that are underserved or not served by a CIL.

Projects must provide demographic and other information demonstrating how the geographic area proposed to be served by the project is not receiving independent living services or is underserved by CILs.

In addition, all projects must demonstrate how they will—

(1) Address the needs of individuals with severe disabilities who are from minority backgrounds;

(2) By October 1, 1993, comply with the standards in section 725(b) of the Act; and

(3) Comply with the assurances in section 725(c) of the Act. Each grantee shall advise applicants for and recipients of services under this program or, as appropriate, the parents, family members, guardians, advocates, or authorized representatives of these individuals, of the availability and purposes of the Client Assistance Program under section 112 of the Act and shall provide them with information on seeking assistance from that program.

Intergovernmental Review

This program is subject to the requirements of Executive Order 12372 and the regulations in 34 CFR part 79. The objective of the Executive order is to foster an intergovernmental partnership and a strengthened federalism by relying on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

In accordance with the order, this document is intended to provide early notification of the Department's specific plans and actions for this program.

Program Authority: 29 U.S.C. 721 (c) and (e) and 796(f).

(Catalog of Federal Domestic Assistance Number 84.132A, Centers for Independent Living)

Dated: June 28, 1993.

Richard W. Riley,

Secretary of Education.

[FR Doc. 93–15599 Filed 6–30–93; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

[CFDA No.: 84.132A]

Centers for Independent Living; Notice Inviting Applications for New Awards for Fiscal Year 1993

Purpose of Program: This program provides support for the planning, operation, conduct, administration, and evaluation of centers for independent living (CILs) that comply with the standards and assurances in section 725 of Title VII, Chapter 1, Part C of the Rehabilitation Act of 1973, as amended. Centers for independent living are defined as consumer-controlled, community-based, cross-disability, nonresidential private nonprofit agencies that are designed and operated within local communities by individuals with disabilities and provide an array of independent living services.

Eligible Applicants: To be eligible to apply for funds under this program, an entity must be a center for independent living that did not receive assistance in FY 1992 under Part B, as in effect on October 28, 1992, the day before the date of enactment of the Rehabilitation Act Amendments of 1992 (1992 Amendments), except that centers that did receive that assistance may propose to open new satellite centers for independent living. Eligibility is limited to those entities in or proposing to serve States and territories where funds are available for competition for new awards that submit a satisfactory application. States and territories with available funds are:

American Samoa	$154,046
Arkansas	99,252
Florida	180,011
Georgia	322,377
Guam	38,137
Indiana	192,439
Iowa	322,377
Minnesota	102,595
Mississippi	475,900
Nevada	92,674
North Dakota	32,377
North Marianas	38,137
Oregon	67,650
Palau	38,137
South Carolina	322,377
Texas	202,574
Vermont	224,071
Virginia	401,749
Wisconsin	264,636

Deadline for Transmittal of Applications: July 30, 1993.

Deadline for Intergovernmental Review: September 29, 1993.

Applications Available: July 1, 1993.

Available Funds: $3,500,000.

Estimated Range of Awards: $30,000 to $200,000.

Estimated Number of Awards: 1 to 4 per eligible State or territory.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

Applicable Regulations: The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 75, 77, 79, 80, 81, 82, 85, and 86.

Priority: The priority in the notice of final distribution of funds, selection criteria, and absolute funding priority for this program, as published elsewhere in this issue of the **Federal Register**, applies to this competition.

Selection Criteria: In evaluating applications for grants under this competition, the Secretary uses the selection criteria in the notice of final distribution of funds, selection criteria, and absolute funding priority for this program, as published elsewhere in this issue of the **Federal Register**.

For Applications: Telephone (202) 205–9343. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

FOR FURTHER INFORMATION CONTACT: John Nelson, U.S. Department of Education, 400 Maryland Avenue, SW., room 3326, Switzer Building, Washington, DC 20202–2741. Telephone: (202) 205–9362 (Voice and TDD).

Program Authority: 29 U.S.C. 721 (c) and (e) and 796(f).

Dated: June 28, 1992.

William L. Smith,

Acting Assistant Secretary, Office of Special Education and Rehabilitative Services.

[FR Doc. 93–15600 Filed 6–30–93; 8:45 am]

BILLING CODE 4000–01–P

federal register

Thursday
July 1, 1993

Part IV

Department of Housing and Urban Development

Office of the Assistant Secretary

24 CFR Parts 207, 213 et al.
Revision of FHA Multifamily Processing; Proposed Rule

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Housing—Federal Housing Commissioner

24 CFR Parts 207, 213, 220, 221, 232, 234, 241, and 244

[Docket No. R-93-1656; FR-3349-P-01]

RIN 2502-AF74

Revision of FHA Multifamily Processing

AGENCY: Office of the Assistant Secretary for Housing-Federal Housing Commissioner, HUD.

ACTION: Proposed rule.

SUMMARY: It is proposed that FHA multifamily processing regulations be amended to: Increase processing/commitment fees; recognize a feasibility processing stage for substantial rehabilitation projects and impose a fee for this processing; require a preapplication conference; eliminate the conditional commitment processing stage for all but section 220 project improvement loans, section 242 hospital mortgages, section 223(f) acquisition/refinancing mortgages, and section 241 supplemental loans; and update nondiscrimination requirements to conform with applicable civil rights statutory and regulatory requirements.

DATES: Comment due date: August 30, 1993.

ADDRESSES: Interested persons are invited to submit comments regarding this rule to the Rules Docket Clerk, Office of General Counsel, room 10276, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-0500. Communications should refer to the above docket number and title. A copy of each communication submitted will be available for public inspection and copying between 7:30 a.m. and 5:30 p.m. weekdays at the above address.

FOR FURTHER INFORMATION CONTACT: Ms. Jessica Franklin, Director, Policies and Procedures Division, Office of Insured Multifamily Housing Development, room 6138, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-8000, telephone (202) 708-2556; or (202) 708-4594 (voice/TDD). (These are not toll-free telephone numbers.)

SUPPLEMENTARY INFORMATION: The information collection requirements contained in this rule have been approved by the Office of Management and Budget under section 3504(h) of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501-3520, and have been assigned OMB control number 2502-0029.

The Department of HUD proposes to amend various relevant parts of title 24 of the Code of Federal Regulations to effect the following changes in its processing procedures for insurance of multifamily project mortgages.

A. Increase Processing Fees

Multifamily mortgage insurance processing and commitment fees currently do not cover expenses incurred by the Department. A Price Waterhouse study estimates that during a 7-year period (FY 1985-FY 1991), fees collected (based on $3/$1000 of the mortgage amount) covered only 68 percent to 92 percent of HUD costs. (These costs were basically Field Office Housing costs—they did not include overhead costs or personnel outside of the Field Office Housing Development Division.)

Implementation of the Delegated Processing program has resulted in an even greater shortfall. Under this program, HUD pays outside contractors to perform underwriting services. Fees charged by delegated processors are based on their cost of doing business, not on a percentage of the mortgage amount. The Price Waterhouse study, although based on a limited sample (since the Delegated Processing program had been in existence only 4 months at the time of the study), indicated that fees collected by HUD covered only 61 percent of costs incurred. (Implementation of Technical Discipline Contracts (TDCs), should result in similar deficiencies in costs versus fees collected.)

It is proposed, therefore, that the regulations be amended to more adequately cover HUD costs by increasing the aggregate fees to $5/$1000 (from the current $3/$1000) of the mortgage amount. This increase will be within the statutory limitation prescribed in section 207(d) of the National Housing Act. Section 207(d) provides that appraisal and inspection charges "shall not aggregate more than 1 percent, of the original principal face amount of the mortgage." With the exception of section 223(f) acquisition/refinancing mortgages, inspection fees are currently based on, and will remain at, not to exceed $5/$1000 of the mortgage amount. Consequently, to remain within the statutory limitation of the statutory 1 percent, total processing/commitment fees cannot be increased by more than $2/$1000 (for a total processing/commitment fee of $5/$1000).

1. Feasibility Processing Stage With Fee

Feasibility processing for substantial rehabilitation projects is recognized by program handbooks as an optional processing stage but it is not recognized by regulation. For this reason, HUD is not able to charge a processing fee, even though feasibility processing requires substantially more effort than Site Appraisal and Market Analysis (SAMA) processing for new construction projects, which are covered by regulation and for which a fee is chargeable.

The inability to charge a fee has significantly contributed to the processing deficit cited above, particularly when a case drops out after the feasibility analysis is completed. In such cases, HUD also loses the opportunity to collect a fee for future (conditional or firm commitment) processing. Furthermore, under Delegated Processing and Technical Discipline Contracts (TDCs), outside contractors must be paid, regardless of whether HUD collects a fee. Collecting a fee to help offset the costs of paying the contractors is simply sound business practice.

Consequently, this rule describes feasibility processing for multifamily substantial rehabilitation projects and reflects long-held HUD policy and practice that issuance of a feasibility letter is not binding upon the Department to the same extent as a SAMA letter. It is a generally known fact that, in cases involving substantial rehabilitation, unanticipated major structural problems may be found at a later stage, and that may result in a dramatic increase in the total cost or rehabilitation. Also, substantial rehabilitation can involve complex readaptation of buildings, originally constructed for a non-residential purpose, that may require major architectural changes in the scope of the work, and consequently, in the Department's conclusions relative to the feasibility of the proposed project. This rule reflects current HUD policy in stating that determinations found in a feasibility letter are not to be binding upon the Department and may be changed in whole or in part at a later time. The feasibility letter may even unilaterally be terminated by the Commissioner if found necessary.

2. Mandatory Preapplication Conference

One of Office of Housing's goals is to speed up mortgage insurance processing. Submission of complete, well-documented applications by sponsors/mortgagees is essential to expeditious processing. Or ly if

applications are complete, and time is not wasted by going back to the sponsor/mortgagee, can processing time goals be met. Consequently, the rule would require sponsors to attend a preapplication conference before an application may be submitted to or accepted by the Field Office. This requirement would apply in all cases (except for part 242 insurance on hospital mortgages) and would include any application by a project sponsor for an operating loss loan.

During the preapplication conference, sponsors would meet with HUD Field Office staff to present a project idea, discuss program requirements and be advised of any known market or environmental concerns. Contents of the application, including required exhibits, would be identified and discussed.

If the proposal were obviously ineligible for mortgage insurance, the sponsor would be so advised. If it were eligible, the Field Office would determine when an application could be expected so that it could consider, based on work load and other priorities, whether it might be a candidate for in-house processing, delegated processing or TDC contracting.

3. Eliminate Conditional Commitment Stage

To speed the processing cycle, it is proposed that the condition commitment processing stage be eliminated for all applications except those for section 220 project improvement loans, section 242 hospital mortgages, loans for acquisition or refinancing of existing construction pursuant to section 223(f), and for section 241 supplemental loans. Sponsors would have the option, after attending the preapplication conference, of submitting an application of SAMA (or feasibility) or firm commitment processing.

As is now the case, the SAMA (or feasibility) letter would not be a commitment to insure the mortgage, nor would it bind HUD to issuing a firm commitment to insure. The purpose of a firm commitment would also remain unchanged. It would be issued only after completion of technical processing and would evidence HUD's approval of the application.

After issuing a SAMA letter, HUD technical staff would provide liaison services to the sponsor's design architect in the development of preliminary drawings, specifications and cost estimates which must be submitted within a time period set forth in the SAMA letter with a processing fee and in a form prescribed by HUD. HUD would review and comment on the drawings and specifications and develop its own cost estimates which would be provided to the sponsor for use in preparing the firm commitment application. The fee would be equal to $1.00 per $1000 of the mortgage amount.

A preliminary work write-up and outline specifications would be required for a feasibility application. Final documents, including final cost estimates, would be submitted at the firm commitment application stage.

4. Application Fees

The rule would impose a fee for feasibility processing (which heretofore has been performed without charge) and would modify the overall existing fee structure which requires an aggregate of $3.00 per $1000 for all processing stages. The modified fee structure would impose an aggregate fee of $5.00 per $1000 of mortgage amount, to be distributed among all processing stages.

Substantial Rehabilitation

A fee of $2.00 per $1000 would be charge at the feasibility stage of substantial rehabilitation projects. The balance of $3.00 per $1000 would be charged at the firm commitment stage.

New Construction

A fee of $1.00 per $1000 would be charged at the SAMA stage, $1.00 per $1000 for the review of plans and specifications and preparation of cost estimates, and the balance of $3.00 per $1000 would be charged at the firm commitment stage.

Section 223(f)/241 Loans

Projects to be acquired or refinanced pursuant to section 223(f) or submitted for section 241 loans would be subject to a conditional commitment processing fee of $3.00 per $1000 and a firm commitment fee of $2.00 per $1000.

5. Update of Nondiscrimination Provisions

This rule also proposes to update existing regulatory provisions referencing nondiscrimination requirements as they apply to multifamily processing. Section 207.20, 203.16, 220.595, 220.615, 221.539, 232.34, 232.74, 234.16, 234.565, 241.150 and 241.640 would be revised to reflect current statutory and regulatory prohibitions against discrimination on the basis of age, disability or familial status.

Other Matters

Executive Order 12291

This rule does not constitute a "major rule" as that term is defined in section 1(b) of the Executive Order on Federal Regulations issued by the President on February 17, 1981. An analysis of the rule indicated that it does not (1) have an annual effect on the economy of $100 million or more; (2) cause a major increase in costs or prices for consumers, individual industries, federal, state, or local government agencies, or geographic regions; or (3) have a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

Regulatory Flexibility Act

In accordance with the Regulatory Flexibility Act 5 U.S.C. 605(b), the undersigned certifies that this rule does not have a significant economic impact on a substantial number of small entities. The economic impact of this rule should not be significant, and would affect small and large entities equally.

Environment

In accordance with 40 CFR 1508.4 of the regulations of the Council on Environmental Quality and 24 CFR 50.20(k) of the HUD regulations, the policies and procedures contained in this rule relate only to internal administrative procedures whose content does not constitute a development decision nor affect the physical condition of project areas on building sites and, therefore, are categorically excluded from the requirements of the National Environmental Policy Act.

HUD Semiannual Agenda

This rule was listed as item 1423 in the Department's Semiannual Agenda of Regulations published on April 26, 1993 (58 FR 24382, 24405), under Office of Housing, sequence number 1396 in compliance with Executive Order 12291 and the Regulatory Flexibility Act.

Executive Order 12612, Federalism

The General Counsel, as the Designated Official under section 6(a) of Executive Order 12612, Federalism, has determined that the policies contained in this rule do not have federalism implications and, thus, are not subject to review under the order. No programmatic or policy changes result from its promulgation which would affect the existing relationship between the federal government and state and local government.

Executive Order 12606, the Family

The General Counsel, as the Designated Official under Executive Order 12606, The Family, has determined that this rule does not have potential for significant impact on family formation, maintenance, and general well-being, and, thus, is not subject to review under the order. No significant change in existing HUD policies or programs will result from promulgation of this rule as those policies and programs relate to family concerns.

List of Subjects

24 CFR Part 207

Manufactured homes, Mortgage insurance, Reporting and recordkeeping requirements, Solar energy.

24 CFR Part 213

Cooperatives, Mortgage insurance, Reporting and recordkeeping requirements.

24 CFR Part 220

Home improvement, Loan programs—housing and community development, Mortgage insurance, Reporting and recordkeeping requirements, Urban renewal.

24 CFR Part 221

Low and moderate income housing, Mortgage insurance, Reporting and recordkeeping requirements.

24 CFR Part 232

Fire prevention, Health facilities, Loan programs—health, Loan programs—housing and community development, Mortgage insurance, Nursing homes, Reporting and recordkeeping requirements.

24 CFR Part 234

Condominiums, Mortgage insurance, Reporting and recordkeeping requirements.

24 CFR Part 241

Energy conservation, Home improvement, Loan programs—housing and community development, Mortgage insurance, Reporting and recordkeeping requirements, Solar energy.

24 CFR Part 244

Health facilities, Mortgage insurance, Reporting and recordkeeping requirements.

Accordingly, the Department proposes to amend 24 CFR parts 207, 213, 220, 221, 232, 234, 241, and 244 as follows:

PART 207—MULTIFAMILY HOUSING MORTGAGE INSURANCE

1. The authority citation for 24 CFR part 207 would be revised to read as follows:

Authority: 12 U.S.C. 1713, 1715b; 42 U.S.C. 3535(d).

Sections 207.258 and 207.258b are also issued under 12 U.S.C. 1701z–11e.

2. Section 207.1 would be revised to read as follows:

§ 207.1 Processing of applications and required fees.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a site appraisal and market analysis (SAMA) letter (for new construction), a feasibility letter (for substantial rehabilitation), or for a firm commitment. After the pre-application conference, the project sponsor may elect to submit an application for a SAMA or a feasibility letter (as appropriate), or for a firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for a SAMA or feasibility letter must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved mortgagee. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(1) *Application fee—SAMA letter.* An application fee of $1 per thousand dollars of the requested mortgage shall accompany the application for a SAMA letter. An additional fee of $1 per thousand dollars of the requested mortgage amount shall be charged for the review of plans and specifications and preparation of cost estimates.

(2) *Application fee—feasibility letter.* An application fee of $2 per thousand dollars of the requested mortgage amount shall accompany the application for a feasibility letter.

(3) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with applications for a SAMA letter or a feasibility letter will aggregate $5 per thousand dollars of the requested mortgage amount to be insured. The payment of an application-commitment fee shall not be required in connection with an insured mortgage involving the sale by the government of housing or property acquired, held or contracted pursuant to the Atomic Energy Community Act of 1955, as provided in § 207.31(b)(4).

(b) *Effect of SAMA letter, feasibility letter, and firm commitment*—(1) *SAMA letter.* The issuance of a SAMA letter indicates completion of the site appraisal and market analysis stage to determine initial acceptability of the site and recognition of a specific market need. The SAMA letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. The SAMA letter precedes the later submission of acceptable plans and specifications for the proposed project and is limited to advising the applicant as to the following determinations of the Commissioner, which shall not be changed to the detriment of an applicant, if the application for a firm commitment is received before expiration of the SAMA letter.

(i) The land value fully improved (with off-site improvements installed).

(ii) The acceptability of the proposed project site, the proposed composition, number and size of the units and the market for the number of proposed units. Where the application is not acceptable as submitted, but can be made acceptable by a change in the number, size, or composition of the units, the SAMA letter may establish the specific lesser number of units which would be acceptable and any acceptable alternative plan for the composition and size of units.

(iii) The acceptability of the unit rents proposed. Where rent levels are unacceptable, the SAMA letter may establish specific rents which are acceptable.

After receiving a SAMA letter, the sponsor shall submit preliminary drawings, specifications and cost estimates in a timeframe prescribed by the Commissioner. The Commissioner will review and comment on the drawings, specifications and cost estimates. The comments will be provided to the sponsor for use in preparing a firm commitment application. A fee will be charged for this review and preparation of cost estimates as prescribed in § 207.1(a)(1).

(2) *Feasibility letter.* The issuance of a feasibility letter indicates approval of the preliminary work write-up and outline specifications and completion of technical processing involving the

estimated rehabilitation cost of the project, the "as is" value of the site, the detailed estimates of operating expenses and taxes, and the estimated mortgage amount. The issuance of a feasibility letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. Determinations found in a feasibility letter are not to be binding upon the Department and may be changed in whole or in part at any later point in time. The letter may even be unilaterally terminated by the Commissioner if found necessary.

(3) *Firm commitment and types of firm commitment.* The issuance of a firm commitment evidences the Commissioner's approval of the application for insurance and sets forth the terms and conditions upon which the mortgage will be insured. The firm commitment may provide for the insurance of advances of mortgage money made during construction or may provide for the insurance of the mortgage upon completion of the improvements.

(c) *Term of SAMA letter, feasibility letter, and firm commitment*—(1) SAMA letter. A SAMA letter shall be effective for whatever term is specified in the letter.

(2) *Feasibility letter.* A feasibility letter shall be effective for whatever term is specified in the letter.

(3) *Firm commitment.* (i) Insurance of advances: A firm commitment to insure advances shall be effective for a period of not more than 60 days from the date of issuance.

(ii) Insurance upon completion: A firm commitment to insure upon completion shall be effective for a designated term within which the mortgagor is required to begin construction and, if construction is begun as required, the commitment shall be effective for such additional period as the Commissioner estimates is necessary for the completion of construction and for obtaining sustaining occupancy.

(iii) The term of either a SAMA letter, or feasibility letter, or firm commitment may be extended in such manner as the Commissioner may prescribe.

(d) *Rejection of an application.* A significant deviation in an application from the terms or findings arrived at in an earlier stage, as evidenced by the SAMA letter or feasibility letter, shall be grounds for rejection of an application for firm commitment. The fees paid to such date shall be considered as having been earned notwithstanding such rejection.

(e) *Inspection fee.* The firm commitment may provide for the payment of an inspection fee in an amount not to exceed $5 per thousand dollars of the commitment. If an inspection fee is required, it shall be paid for as follows:

(1) If the case involves insurance of advances, it shall be paid at the time of initial endorsement.

(2) If the case involves insurance upon completion, it shall be paid before the date construction is begun.

(f) *Fees on increases*—(1) *Increases in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(2) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

(3) *Loan to cover operating losses.* In connection with a loan to cover operating losses under § 207.4(f), a combined application and commitment fee of $5 per thousand dollars of the amount of the loan applied for shall be submitted with the application for a firm commitment. No inspection fee shall be required.

(g) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied by a fee of 50 cents per thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

(h) *Transfer fee.* Upon application for approval of a transfer of physical assets or the substitution of mortgagors, a transfer fee of 50 cents per thousand dollars shall be paid on the original face amount of the mortgage in all cases, except that a transfer fee shall not be paid where both parties to the transfer transaction are nonprofit organizations.

(i) *Refund of fees.* If the amount of the commitment issued or increase in mortgage granted is less than the amount applied for, the Commissioner shall refund the excess amount of the application and commitment fees submitted by the applicant. If an application is rejected before it is assigned for processing, or in such other instances as the Commissioner may determine, the entire application and commitment fee or any portion thereof may be returned to the applicant. Commitment, inspection and reopening fees may be refunded, in whole or in part, if it is determined by the Commissioner that there is a lack of need for the housing or that the construction or financing of the project has been prevented because of condemnation proceedings or other legal action taken by a governmental body or public agency, or in such other instances as the Commissioner may determine. A transfer fee may be refunded only in such instances as the Commissioner may determine.

(j) *Fees not required.* The payment of an application, commitment, inspection, or reopening fee shall not be required in connection with the insurance of a mortgage involving the sale by the Secretary of any property acquired under any section or title of the Act.

3. Paragraphs (a) introductory text and (a)(1) of § 207.20 would be revised to read as follows:

§ 207.20 Occupancy requirements.

(a) *Nondiscrimination against families with children and persons with disabilities.* Except in the case of a mortgage with respect to a

manufactured home park designed exclusively for occupancy by elderly persons, the mortgagor shall certify under oath to the Commissioner that:

(1) In selecting tenants for the project covered by the mortgage, the mortgagor will not discriminate against any family by reason of the fact that there are children in the family and/or persons with disabilities; and

* * * * *

4. Paragraph (a) of § 207.32a would be revised to read as follows:

§ 207.32a Eligibility of mortgages on existing projects.

* * * * *

(a) *Processing of applications and required fees.* (1) A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a conditional or firm commitment. After the pre-application conference an application for a conditional or firm commitment for insurance of a mortgage on a project shall be submitted by the sponsor and an approved mortgagee. Such application shall be submitted to the local HUD office on a HUD approved form. An application may, at the option of the applicant, be submitted for a firm commitment omitting the conditional commitment stage. No application shall be considered unless accompanied by all exhibits required by the form and program handbooks. An application may be made for a commitment which provides for the insurance of the mortgage upon completion of any improvements or for a commitment which provides, in accordance with standards established by the Commissioner, for the completion of specified repairs and improvements after endorsement.

(2) *Application fee—conditional commitment.* An application-commitment fee for $3 per thousand dollars of the requested mortgage amount shall accompany an application for conditional commitment.

(3) *Application fee-firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee of $5 per thousand dollars of the requested mortgage amount to be insured less any amount previously received for a conditional commitment.

(4) *Inspection fee.* Where an application provides for the completion or repairs and improvements, an inspection fee may be charged by the Commissioner. A fee of $30 per dwelling unit will be charged where the project involves repairs of $3000 or less per unit. The fee for projects involving repairs in excess of $3000 per dwelling unit may not exceed one percent of the cost of the repairs.

* * * * *

PART 213—COOPERATIVE HOUSING MORTGAGE INSURANCE

5. The authority citation for 24 part 213 would be revised to read as follows:

Authority: 12 U.S.C. 1715b, 1715e; 42 U.S.C. 3535(d).

6. Section 213.2 would be revised to read as follows:

§ 213.2 Processing of applications.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a site appraisal and market analysis (SAMA) letter (for new construction), a feasibility letter (for substantial rehabilitation), or for a firm commitment. After the pre-application conference, the project sponsor may elect to submit an application for a SAMA or a feasibility letter (as appropriate), or for a firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for a SAMA or feasibility letter must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved mortgagee. Application shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(b) *Effect of SAMA letter, feasibility letter, and firm commitment*—(1) *SAMA letter.* The issuance of a SAMA letter indicates completion of the site appraisal and market analysis stage to determine initial acceptability of the site and recognition of a specific market need. The SAMA letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. The SAMA letter precedes the later submission of acceptable plans and specifications for the proposed project and is limited to advising the applicant as to the following determinations of the Commissioner, which shall not be changed to the detriment of an applicant, if the application for a firm commitment is received before expiration of the SAMA letter.

(i) The land value fully improved (with off-site improvements installed).

(ii) The acceptability of the proposed project site, the proposed composition, number and size of the units and the market for the number of proposed units. Where the application is not acceptable as submitted, but can be made acceptable by a change in the number, size, or composition of the units, the SAMA letter may establish the specific lesser number of units which would be acceptable and any acceptable alternative plan for the composition and size of units.

(iii) The acceptability of the unit rents proposed. Where rent levels are unacceptable, the SAMA letter may establish specific rents which are acceptable.

After receiving a SAMA letter, the sponsor shall submit preliminary drawings, specifications and cost estimates in a timeframe prescribed by the Commissioner. The Commissioner will review and comment on the drawings, specifications and cost estimates. The comments will be provided to the sponsor for use in preparing a firm commitment application. A fee will be charged for this review and preparation of cost estimates as prescribed in § 207.1(a)(1).

(2) *Feasibility letter.* The issuance of a feasibility letter indicates approval of the preliminary work write-up and outline specifications and completion of technical processing involving the estimated rehabilitation cost of the project, the "as is" value of the site, the detailed estimates of operating expenses and taxes, and the estimated mortgage amount. The issuance of a feasibility letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. Determinations found in a feasibility letter are not to be binding upon the Department and may be changed in whole or in part at any later point in time. The letter may even be unilaterally terminated by the Commissioner if found necessary.

(3) *Firm commitment and types of firm commitment.* The issuance of a firm commitment evidences the Commissioner's approval of the application for insurance and sets forth the terms and conditions upon which the mortgage will be insured. The firm commitment may provide for the insurance of advances of mortgage money made during construction or may provide for the insurance of the mortgage upon completion of the improvements.

(c) *Term of SAMA letter, feasibility letter and firm commitment*—(1) SAMA letter. A SAMA letter shall be effective for whatever term is specified in the letter.

(2) *Feasibility letter.* A feasibility letter shall be effective for whatever term is specified in the text of the letter.

(3) *Firm commitment.* (i) Insurance of advances: A firm commitment to insure advance shall be effective for a period of not more than 60 days from the date of issuance.

(ii) Insurance upon completion: A firm commitment to insure upon completion shall be effective for a designated term within which the mortgagor is required to begin construction and, if construction is begun as required, the commitment shall be effective for such additional period as the Commissioner estimates is necessary for the completion of construction and for obtaining sustaining occupancy.

(iii) The term of either a SAMA letter, or feasibility letter, or firm commitment may be extended in such manner as the Commissioner may prescribe.

7. Section 213.3 would be revised to read as follows:

§213.3 Fees required by Commissioner.

(a) *Application fee—SAMA letter.* An application fee of $1 per thousand dollars of the requested mortgage shall accompany the application for a SAMA letter. An additional fee of $1 per thousand dollars of the requested mortgage amount shall be charged for the review of plans and specifications and preparation of cost estimates.

(b) *Application fee—feasibility letter.* An application fee of $2 per thousand dollars of the requested mortgage amount shall accompany the application for a feasibility letter.

(c) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with applications for a SAMA letter or a feasibility letter will aggregate $5 per thousand dollars of the requested mortgage amount to be insured.

(d) *Rejection of an application.* A significant deviation in an application from the terms or findings arrived at in an earlier stage, as evidenced by the SAMA letter or feasibility letter, shall be grounds for rejection of an application for firm commitment. The fees paid to such date shall be considered as having been earned notwithstanding such rejection.

(e) *Fees on increases*—(1) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(2) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

(3) *Loan to cover operating losses.* In connection with a loan to cover operating loses under § 213.71(k), a combined application and commitment fee of $5 per thousand dollars of the amount of the loan applied for shall be submitted with the application for a firm commitment. No inspection fee shall be required.

(f) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied be a fee of 50 cents per thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

(g) *Inspection fee.* The firm commitment may provide for the payment of an inspection fee in an amount not to exceed $5 per thousand dollars of the commitment. If an inspection fee is required, it shall be paid for as follows:

(1) If the case involves insurance of advances, it shall be paid at the time of initial endorsement.

(2) If the case involves insurance upon completion, it shall be paid before the date construction is begun.

(h) *Transfer fee.* Upon application for approval of a transfer of physical assets or the substitution of mortgagors, a transfer fee of 50 cents per thousand dollars shall be paid on the original face amount of the mortgage in all cases, except that a transfer fee shall not be paid where both parties to the transfer transaction are nonprofit organizations.

(i) *Refund of fees.* If the amount of the commitment issued or increase in mortgage granted is less than the amount applied for, the Commissioner shall refund the excess amount of the application and commitment fees submitted by the applicant. If an application is rejected before it is assigned for processing, or in such other instances as the Commissioner may determine, the entire application and commitment fee or any portion thereof may be returned to the applicant. Commitment, inspection and reopening fees may be refunded, in whole or in part, if it is determined by the Commissioner that there is a lack of need for the housing or that the construction or financing of the project has been prevented because of condemnation proceedings or other legal action taken by a governmental body or public agency, or in such other instances as the Commissioner may determine. A transfer fee may be refunded only in such instances as the Commissioner may determine.

(j) *Fees not required.* The payment of an application, commitment, inspection, or reopening fee shall not be required in connection with the insurance of a mortgage involving the sale by the Secretary of any property acquired under any section or title of the Act.

8. Paragraphs (a)(1) and (a)(2) § 213.16 would be revised to read as follows:

§213.16 Mortgagor's certificate for nondiscrimination and mortgage covenant regarding use of property.

(a) * * *

(1) That neither it nor anyone authorized to act for it, will refuse to sell or rent, after the making of a bona fide offer, or refuse to negotiate for the

sale or rental of, or otherwise make unavailable or deny the dwelling or property covered by the mortgage to any person because of race, color, religion, sex, familial status, handicap, age, or national origin.

(2) That any restrictive covenant on such property relating to race, color, religion, sex, familial status, handicap, age, or national origin is recognized as being illegal and void and is hereby specifically disclaimed.

* * * * *

PART 220—MORTGAGE INSURANCE AND INSURED IMPROVEMENT LOANS FOR URBAN RENEWAL AND CONCENTRATED DEVELOPMENT AREAS

9. The authority citation for 24 CFR part 220 would be revised to read as follows:

Authority: 12 U.S.C. 1713, 1715b, 1715k; 42 U.S.C. 3535(d).

10. Paragraph (a) of § 220.501 would be revised to read as follows:

§ 220.501 Cross-reference.

(a) All of the provisions of subpart A, part 207 of this chapter, concerning eligibility requirements of mortgages covering multifamily housing under section 207 of the National Housing Act, apply with full force and effect to multifamily project mortgages insured section 220 of the National Housing Act, except the following provisions:

Sec.
207.4 Maximum mortgage amounts.
207.11 Soundness of project.
207.17 Classification.
207.19 Required supervision of private mortgagors.
207.24 Development of property.
207.27 Certificates of actual cost.
207.31 Eligibility of miscellaneous-type mortgages.
207.32a Eligibility of mortgages on existing projects.
207.33 Eligibility of mortgages on trailer courts or parks for trailer coach mobile dwellings.

* * * * *

11. Section 220.552 would be revised to read as follows:

§ 220.552 Processing of applications.

An applicant for a project improvement loan must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a conditional commitment or a firm commitment. After the pre-application conference, the project sponsor may elect to submit an application for either a conditional or firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for either type commitment for insurance must be submitted by both the project sponsor and an eligible lender. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

12. Section 220.553 would be amended by revising paragraph (b) and adding paragraph (c) and to read as follows:

§ 220.553 Application fee.

* * * * *

(b) *Application fee-conditional commitment.* An application fee of $3 per thousand dollars of the requested loan amount shall accompany the application for a conditional commitment.

(c) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with application for a conditional commitment will aggregate $5 per thousand dollars of the requested loan amount to be insured.

13. Section 220.560 would be revised to read as follows:

§ 220.560 Fee on increases.

(a) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. this combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(b) *Increase in loan between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the loan, either by amendment or by substitution of a new loan, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

14. Paragraph (b) of § 220.595 would be revised to read as follows:

§ 220.595 Certificate of nondiscrimination by borrower.

* * * * *

(b) That any restrictive covenant on such property relating to race, color, religion, sex, familial status, handicap, age, or national origin is recognized as being illegal and void and is hereby specifically disclaimed.

* * * * *

15. Section 220.615 is revised to read as follows:

§ 220.615 Discrimination prohibited.

Any contract or subcontract executed for the performance of constructing the improvements to the project shall provide that there shall be no discrimination against any employee or applicant for employment because of race, color, religion, sex, handicap, age, or national origin.

PART 221—LOW COST AND MODERATE INCOME MORTGAGE INSURANCE

16. The authority citation for 24 CFR part 221 would be revised to read as follows:

Authority: 12 U.S.C. 1707(a), 1715b, 1715l; 42 U.S.C. 3535(d).

17. Section 221.502(a) would be revised to read as follows:

§ 221.502 Processing of applications.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a site appraisal and market analysis (SAMA) letter (for new construction), a feasibility letter (for substantial rehabilitation), or for a firm commitment. After the pre-application conference, the project sponsor may

elect to submit an application for a SAMA or a feasibility letter (as appropriate), or for a firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for a SAMA or feasibility letter must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved mortgagee. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless:

(1) Accompanied by all exhibits required by the form and program handbooks and

(2) In a case involving a mortgage which is to bear interest at the below market rate provided in § 221.518(b), the Commissioner shall have issued a memorandum evidencing allocation of funds to the proposed project.

* * * * *

18. Section 221.503 would be revised to read as follows:

§ 221.503 Application fees.

(a) *Application fee—SAMA letter.* An application fee of $1 per thousand dollars of the requested mortgage shall accompany the application for a SAMA letter. An additional fee of $1 per thousand dollars of the requested mortgage amount shall be charged for the review of plans and specifications and preparation of cost estimates.

(b) *Application fee—feasibility letter.* An application fee of $2 per thousand dollars of the requested mortgage amount shall accompany the application for a feasibility letter.

(c) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with applications for a SAMA letter or a feasibility letter, will aggregate $5 per thousand dollars of the requested mortgage amount to be insured.

19. Section 221.504 would be revised to read as follows:

§ 221.504 Rejection of application.

A significant deviation in an application from the terms or findings arrived at in an earlier stage, as evidenced by the SAMA letter or feasibility letter, shall be grounds for rejection of an application for firm commitment. The fees paid to such date shall be considered as having been earned notwithstanding such rejection.

20. Section 221.506(a) would be revised to read as follows:

§ 221.506 Fees on increases.

(a) *Fees on increases*—(1) *Increase in firm commitment before endorsement.* An application, field before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(2) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

(3) *Loan to cover operating losses.* In connection with a loan to cover operating losses under § 213.71(k), a combined application and commitment fee of $5 per thousand dollars of the amount of the loan applied for shall be submitted with the application for a firm commitment. No inspection fee shall be required.

* * * * *

21. Section 221.509 would be revised to read as follows:

§ 221.509 Effect and terms of SAMA letter, feasibility letter and firm commitment.

(a) *Effect of SAMA letter, feasibility letter, and firm commitment*—(1) *SAMA letter.* The issuance of a SAMA letter indicates completion of the site appraisal and market analysis stage to determine initial acceptability of the site and recognition of a specific market need. The SAMA letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. The SAMA letter precedes the later submission of acceptable plans and specifications for the proposed project and is limited to advising the applicant as to the following determinations of the Commissioner, which shall not be changed to the detriment of an applicant, if the application for a firm commitment is received before expiration of the SAMA letter.

(i) The land value fully improved (with off-site improvements installed).

(ii) The acceptability of the proposed project site, the proposed composition, number and size of the units and the market for the number of proposed units. Where the application is not acceptable as submitted, but can be made acceptable by a change in the number, size, or composition of the units, the SAMA letter may establish the specific lesser number of units which would be acceptable and any acceptable alternative plan for the composition and size of units.

(iii) The acceptability of the unit rents proposed. Where rent levels are unacceptable, the SAMA letter may establish specific rents which are acceptable.

After receiving a SAMA letter, the sponsor shall submit preliminary drawings, specifications and cost estimates in a timeframe prescribed by the Commissioner. The Commissioner will review and comment on the drawings, specifications and cost estimates. The comments will be provided to the sponsor for use in preparing a firm commitment application. A fee will be charged for this review and preparation of cost estimates as prescribed in § 221.503 of this part.

(b) *Feasibility letter.* The issuance of a feasibility letter indicates approval of the preliminary work write-up and outline specifications an completion of technical processing involving the estimated rehabilitation cost of the project, the "as is" value of the site, the detailed estimates of operating expenses and taxes, and the estimated mortgage amount. The issuance of a feasibility letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. Determinations found in a feasibility letter are not to be binding upon the Department and may be changed in

whole or in part at any later point in time. The letter may even be unilaterally terminated by the Commissioner if found necessary.

(c) *Firm commitment and types of firm commitment.* The issuance of a firm commitment evidences the Commissioner's approval of the application for insurance and sets forth the terms and conditions upon which the mortgage will be insured. The firm commitment may provide for the insurance of advances of mortgage money made during construction or may provide for the insurance of the mortgage upon completion of the improvements.

(d) *Term of SAMA letter, feasibility letter, and firm commitment*—(1) SAMA letter. A SAMA letter shall be effective for whatever term is specified in the letter.

(2) *Feasibility letter.* A feasibility letter shall be effective for whatever term is specified in the letter.

(3) *Firm commitment.* (i) Insurance of advances: A firm commitment to insure advances shall be effective for a period of not more than 60 days from the date of issuance.

(ii) Insurance upon completion: A firm commitment to insure upon completion shall be effective for a designated term within which the mortgagor is required to begin construction and, if construction is begun as required, the commitment shall be effective for such additional period as the Commissioner estimates is necessary for the completion of construction and for obtaining sustaining occupancy.

(iii) The term of either a SAMA letter, or feasibility letter, or firm commitment may be extended in such manner as the Commissioner may prescribe.

(e) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied by a fee of 50 cents per thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

22. Section 221.539 would be revised to read as follows:

§ 221.539 Discrimination prohibited.

Any contract or subcontract executed for the performance of construction of the project shall contain a provision that there shall be no discrimination against any employee, or applicant for employment because of race, color, religion, sex, handicap, age, or national origin. Where the mortgagor is the general contractor, the building loan agreement shall contain the above provisions.

PART 232—MORTGAGE INSURANCE FOR NURSING HOMES, INTERMEDIATE CARE FACILITIES, AND BOARD AND CARE HOMES

23. The authority citation 24 CFR part 232 would be revised to read as follows:

Authority: 12 U.S.C. 1715b, 1715w; 42 U.S.C. 3535(d).

24. Section 232.5 would be revised to read as follows:

§ 232.5 Processing of applications.

Pre-application conference. A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a site appraisal and market analysis (SAMA) letter (for new construction), a feasibility letter (for substantial rehabilitation), or for a firm commitment. After the pre-application conference, the project sponsor may elect to submit an application for a SAMA or a feasibility letter (as appropriate), or for a firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for a SAMA or feasibility letter must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved mortgagee. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

25. Section 232.10 would be revised to read as follows:

§ 232.10 Application-commitment fees.

(a) *Application fee—SAMA letter.* An application fee of $1 per thousand dollars of the requested mortgage shall accompany the application for a SAMA letter. An additional fee of $1 per thousand dollars of the requested mortgage amount shall be charged for the review of plans and specifications and preparation of cost estimates.

(b) *Application fee—feasibility letter.* An application fee of $2 per thousand dollars of the requested mortgage amount shall accompany the application for a feasibility letter.

(c) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with applications for a SAMA letter or a feasibility letter will aggregate $5 per thousand dollars of the requested mortgage amount to be insured.

26. Section 232.11 would be revised to read as follows:

§ 232.11 Rejection of an application.

A significant deviation in an application from the terms or findings arrived at in an earlier stage, as evidenced by the SAMA letter or feasibility letter, shall be grounds for rejection of an application for firm commitment. The fees paid to such date shall be considered as having been earned notwithstanding such rejection.

27. Section 232.13 would be revised to read as follows:

§ 232.13 Fees on increases.

(a) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(b) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee

was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

(c) *Loan to cover operating losses.* In connection with a loan to cover operating losses under § 232.31a, a combined application and commitment fee of $5 per thousand dollars of the amount of the loan applied for shall be submitted with the application for a firm commitment. No inspection fee shall be required.

(d) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied by a fee of 50 cents thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

28. Paragraphs (a) and (b) of § 232.34 would be revised to read as follows:

§ 232.34 Certification of nondiscrimination by mortgagor.

* * * * *

(a) That neither it nor anyone authorized to act for it, will refuse to sell or rent, after the making of a bona fide offer, or refuse to negotiate for the sale or rental of, or otherwise make unavailable or deny the dwelling or property covered by the mortgage to any person because of race, color, religion, sex, familial status, handicap, age, or national origin.

(b) That any restrictive covenant on such property relating to race, color, religion, sex, familial status, handicap, age, or national origin is recognized as being illegal and void and is hereby specifically disclaimed.

* * * * *

29. Section 232.50 would be revised to read as follows:

§ 232.50 Effect and term of SAMA letter, feasibility letter and firm commitment.

(a) *SAMA letter.* The issuance of a SAMA letter indicates completion of the site appraisal and market analysis stage to determine initial acceptability of the site and recognition of a specific market need. The SAMA letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. The SAMA letter precedes the later submission of acceptable plans and specifications for the proposed project and is limited to advising the applicant as to the following determinations of the Commissioner, which shall not be changed to the detriment of an applicant, if the application for a firm commitment is received before expiration of the SAMA letter.

(1) The land value fully improved (with off-site improvements installed).

(2) The acceptability of the proposed project site, the proposed composition, number and size of the units and the market for the number of proposed units. Where the application is not acceptable as submitted, but can be made acceptable by a change in the number, size, or composition of the units, the SAMA letter may establish the specific lesser number of units which would be acceptable and any acceptable alternative plan for the composition and size of units.

(3) The acceptability of the unit rents proposed. Where rent levels are unacceptable, the SAMA letter may establish specific rents which are acceptable.

After receiving a SAMA letter, the sponsor shall submit preliminary drawings, specifications and cost estimates in a timeframe prescribed by the Commissioner. The Commissioner will review and comment on the drawings, specifications and cost estimates which will be provided to the sponsor for use in preparing a firm commitment application. A fee will be charged for this review and preparation of cost estimates as prescribed in § 231.10.

(b) *Feasibility letter.* The issuance of a feasibility letter indicates approval of the preliminary work write-up and outline specifications and completion of technical processing involving the estimated rehabilitation cost of the project, the "as is" value of the site, the detailed estimates of operating expenses and taxes, and the estimated mortgage amount. The issuance of a feasibility letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. Determinations found in a feasibility letter are not to be binding upon the Department and may be changed in whole or in part at any later point in time. The letter may even be unilaterally terminated by the Commission if found necessary.

(c) *Firm commitment and types of firm commitment.* The issuance of a firm commitment evidences the Commissioner's approval of the application for issuance and sets forth the terms and conditions upon which the mortgage will be insured. The firm commitment may provide for the insurance of advances of mortgage money made during construction or may provide for the insurance of the mortgage upon completion of the improvements.

(d) *Term of SAMA letter, feasibility letter, and firm commitment*—(1) SAMA letter. A SAMA letter shall be effective for whatever term is specified in the letter.

(2) *Feasibility letter.* A feasibility letter shall be effective for whatever term is specified in the letter.

(3) *Firm commitment.* (i) Insurance of advances: A firm commitment to insure advances shall be effective for a period of not more than 60 days from the date of issuance.

(ii) Insurance upon completion: A firm commitment to insure upon completion shall be effective for a designated term within which the mortgagor is required to begin construction and, if construction is begun as required, the commitment shall be effective for such additional period as the Commissioner estimates is necessary for the completion of construction and for obtaining sustaining occupancy.

(iii) The term of either a SAMA letter, or feasibility letter, or firm commitment may be extended in such manner as the Commissioner may prescribe.

(e) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied by a fee of 50 cents per thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

30. Section 232.74 would be revised to read as follows:

§ 232.74 Discrimination prohibited.

Any contract or subcontract executed for the performance of construction of the project shall contain a provision that there shall be no discrimination against any employee, or applicant for employment because of race, color, religion, sex, handicap, age, or national origin. Where the mortgagor is the general contractor, the building loan agreement shall contain the above provisions.

PART 234—CONDOMINIUM OWNERSHIP MORTGAGE INSURANCE

31. The authority citation for 24 CFR part 234 would continue to read as follows:

Authority: 12 U.S.C. 1715(b), 1715y; 42 U.S.C. 3535(d).

32. Paragraphs (a) and (b) of § 234.16 would be revised to read as follows:

§ 234.16 Certificate of nondiscrimination by mortgagor.

* * * * *

(a) That neither it nor anyone authorized to act for it, will refuse to sell or rent, after the making of a bona fide offer, or refuse to negotiate for the sale or rental of, or otherwise make unavailable or deny the dwelling or property covered by the mortgage to any person because of race, color, religion, sex, familial status, handicap, age, or national origin.

(b) That any restrictive covenant on such property relating to race, color, religion, sex, familial status, handicap, age, or national origin is recognized as being illegal and void and is hereby specifically disclaimed.

* * * * *

33. Paragraphs (a) introductory text and (a)(1) of § 234.565 would be revised to read as follows:

§ 234.565 Occupancy requirements.

(a) *Nondiscrimination against families with children and persons with disabilities.* Except in the case of a mortgage with respect to a manufactured home park designed exclusively for occupancy by elderly persons, the mortgagor shall certify under oath to the Commissioner that:

(1) In selecting tenants for the project covered by the mortgage, the mortgagor will not discriminate against any family by reason of the fact that there are children in the family and/or persons with disabilities; and

* * * * *

PART 241—SUPPLEMENTARY FINANCING FOR INSURED PROJECT MORTGAGES

34. The authority citation for 24 CFR part 241 would be revised to read as follows:

Authority: 12 U.S.C. 1715b, 1715z–6; 42 U.S.C. 3535(d).

35. Section 241.10 would be revised to read as follows:

§ 241.10 Processing of applications and required fees.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a conditional or firm commitment for insurance of an improvement loan on a project. An application for a conditional commitment must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved lender. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(b) *Application and commitment fees*—(1) *Application for conditional commitment.* An application fee of $3 per thousand dollars of the amount of the loan applied for shall accompany the application for a conditional commitment.

(2) *Application for firm commitment.* An application for a firm commitment shall be accompanied by the payment of an application fee of $5 per thousand dollars of the amount of the loan applied for less any amount previously received for a conditional commitment.

36. Section 241.25 would be revised to read as follows:

§ 241.25 Fees on increases.

(a) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(b) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

37. Section 241.150 would be revised to read as follows:

§ 241.150 Discrimination prohibited.

Any contract or subcontract executed for the performance of constructing the improvements to the project shall provide that there shall be no discrimination against any employee or applicant for employment because of race, color, religion, sex, handicap, age, or national origin.

38. Section 241.505 would be revised to read as follows:

§ 241.505 Processing of applications and required fees.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a conditional or firm commitment for insurance of an energy savings improvement loan on a project. An application for a conditional commitment must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved lender. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(b) *Application and commitment fees*—(1) *Application for conditional commitment.* An application fee of $3 per thousand dollars of the amount of the loan applied for shall accompany the application for a conditional commitment.

(2) *Application for firm commitment.* An application for a firm commitment shall be accompanied by the payment of an application fee of $3 per thousand dollars of the amount of the loan applied for, if such fee has not been previously submitted. A commitment fee, in an amount which, when added to the application fee, will aggregate $5 per thousand dollars of the loan applied

for, shall also be submitted with application for a firm commitment.

39. Section 241.520 would be revised to read as follows:

§241.520 Fees on increases.

(a) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(b) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

40. Section 241.640 would be revised to read as follows:

§241.640 Discrimination prohibited.

Any contract or subcontract executed for the performance of constructing the improvements to the project shall provide that there shall be no discrimination against any employee or applicant for employment because of race, color, religion, sex, handicap, age, or national origin.

41. Section 241.1015 would be revised to read as follows:

§241.1015 Processing of applications and required fees.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a conditional or firm commitment for insurance of an equity loan on a project. An application for a conditional commitment must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved lender. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(b) *Application and commitment fees*—(1) *Application for conditional commitment.* An application fee of $3 per thousand dollars of the amount of the loan applied for shall accompany the application for a conditional commitment.

(2) *Application for firm commitment.* An application for a firm commitment shall be accompanied by the payment of an application fee in an amount which, when added to any prior fee received in connection with a conditional commitment application, will aggregate $5 per thousand dollars in the loan applied for.

PART 244—MORTGAGE INSURANCE FOR GROUP PRACTICE FACILITIES [TITLE XI]

42. The authority citation for 24 CFR part 244 would be revised to read as follows:

Authority: 12 U.S.C. 1715b, 1749aaa–5; 42 U.S.C. 3535(d).

43. Section 244.10 would be revised to read as follows:

§244.10 Processing of applications and required fees.

(a) *Pre-application conference.* A project sponsor must submit a request for a pre-application conference to its local HUD field office. In all cases, participation in such a conference is required as a condition to submission of an initial application for either a site appraisal and market analysis (SAMA) letter (for new construction), a feasibility letter (for substantial rehabilitation), or for a firm commitment. After the pre-application conference, the project sponsor may elect to submit an application for a SAMA or a feasibility letter (as appropriate), or for a firm commitment for insurance depending upon the completeness of the drawings, specifications and other required exhibits. An application for a SAMA or feasibility letter must be submitted by the project sponsor. An application for a firm commitment for insurance must be submitted by both the project sponsor and an approved mortgagee. Applications shall be submitted to the local HUD field office on HUD-approved forms. No application will be considered unless accompanied by all exhibits required by the form and program handbooks.

(1) *Application fee—SAMA letter.* An application fee of $1 per thousand dollars of the requested mortgage shall accompany the application for a SAMA letter. An additional fee of $1 per thousand dollars of the requested mortgage amount shall be charged for the review of plans and specifications and preparation of cost estimates.

(2) *Application fee—feasibility letter.* An application fee of $2 per thousand dollars of the requested mortgage amount shall accompany the application for a feasibility letter.

(3) *Application fee—firm commitment.* An application for firm commitment shall be accompanied by an application-commitment fee which, when added to any prior fees received in connection with applications for a SAMA letter or a feasibility letter, will aggregate $5 per thousand dollars of the requested mortgage amount to be insured.

(b) *Effect of SAMA letter, feasibility letter, and firm commitment—(1) SAMA letter.* The issuance of a SAMA letter indicates completion of the site appraisal and market analysis stage to determine initial acceptability of the site and recognition of a specific market need. The SAMA letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. The SAMA letter precedes the later submission of acceptable plans and specifications for the proposed project and is limited to advising the applicant as to the following determinations of the Commissioner, which shall not be changed to the detriment of an applicant, if the application for a firm commitment is received before expiration of the SAMA letter.

(i) The land value fully improved (with off-site improvements installed).

(ii) The acceptability of the proposed project site, the proposed composition of the group practice and the market for the proposed services. Where the application is not acceptable as submitted, but can be made acceptable

by a change in composition or type of service, the SAMA letter may establish acceptable alternative plans.

After receiving a SAMA letter, the sponsor shall submit preliminary drawings, specifications and cost estimates in a timeframe prescribed by the Commissioner. The Commissioner will review and comment on the drawings, specifications and cost estimates which will be provided to the sponsor for use in preparing a firm commitment application. A fee will be charged for this review and preparation of cost estimates as prescribed in § 241.1(a)(1) of this part.

(2) *Feasibility letter.* The issuance of a feasibility letter indicates approval of the preliminary work write-up and outline specifications and completion of technical processing involving the estimated rehabilitation cost of the project, the "as is" value of the site, the detailed estimates of operating expenses and taxes, and the estimated mortgage amount. The issuance of a feasibility letter is not a commitment to insure a mortgage for the proposed project and does not bind the Commissioner to issue a firm commitment to insure. Determinations found in a feasibility letter are not to be binding upon the Department and may be changed in whole or in part at any later point in time. The letter may even be unilaterally terminated by the Commissioner if found necessary.

(3) *Firm commitment and types of firm commitment.* The issuance of a firm commitment evidences the Commissioner's approval of the application for insurance and sets forth the terms and conditions upon which the mortgage will be insured. The firm commitment may provide for the insurance of advances of mortgage money made during construction or may provide for the insurance of the mortgage upon completion of the improvements.

(c) *Term of SAMA letter, feasibility letter, and firm commitment*—(1) SAMA letter. A SAMA letter shall be effective for whatever term is specified in the letter.

(2) *Feasibility letter.* A feasibility letter shall be effective for whatever term is specified in the letter.

(3) *Firm commitment.* (i) Insurance of advances: A firm commitment to insure advances shall be effective for a period of not more than 60 days from the date of issuance.

(ii) Insurance upon completion: A firm commitment to insure upon completion shall be effective for a designated term within which the mortgagor is required to begin construction and, if construction is begun as required, the commitment shall be effective for such additional period as the Commissioner estimates is necessary for the completion of construction and for obtaining sustaining occupancy.

(iii) The term of either a SAMA letter, or feasibility letter, or firm commitment may be extended in such manner as the Commissioner may prescribe.

(d) *Rejection of an application.* A significant deviation in an application from the terms or findings arrived at in an earlier stage, as evidenced by the SMA letter or feasibility letter, shall be grounds for rejection of an application for firm commitment. The fees paid to such date shall be considered as having been earned notwithstanding such rejection.

(e) *Inspection fee.* The firm commitment may provide for the payment of an inspection fee in an amount not to exceed $5 per thousand dollars of the commitment. If an inspection fee is required, it shall be paid for as follows:

(1) If the case involves insurance of advances, it shall be paid at the time of initial endorsement.

(2) If the case involves insurance upon completion, it shall be paid before the date construction is begun.

(f) *Fees on increases.*—(1) *Increase in firm commitment before endorsement.* An application, filed before initial endorsement (or before endorsement in a case involving insurance upon completion), for an increase in the amount of an outstanding firm commitment shall be accompanied by a combined additional application and commitment fee. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the requested increase. If an inspection fee was required in the original commitment, an additional inspection fee shall be paid in an amount computed at the same dollar rate per thousand dollars of the amount of increase in commitment as was used for the inspection fee required in the original commitment. When insurance of advances is involved, the additional inspection fee shall be paid at the time of initial endorsement. When insurance upon completion is involved, the additional inspection fee shall be paid before the date construction is begun or if construction has begun, it shall be paid with the application for increase.

(2) *Increase in mortgage between initial and final endorsement.* Upon an application, filed between initial and final endorsement, for an increase in the amount of the mortgage, either by amendment or by substitution of a new mortgage, a combined additional application and commitment fee shall accompany the application. This combined additional fee shall be in an amount which will aggregate $5 per thousand dollars of the amount of the increase requested. If an inspection fee was required in the original commitment, an additional inspection fee shall accompany the application in an amount not to exceed the $5 per thousand dollars of the amount of the increase requested.

(3) *Loan to cover operating losses.* In connection with a loan to cover operating losses, a combined application and commitment fee of $5 per thousand dollars of the amount of the loan applied for shall be submitted with the application for a firm commitment. No inspection fee shall be required.

(g) *Reopening of expired commitments.* An expired commitment may be reopened if a request for reopening is received by the Commissioner within 90 days of the expiration of the commitment. The reopening request shall be accompanied by a fee of 50 cents per thousand dollars of the amount of the expired commitment. If the reopening request is not received by the Commissioner within the required 90-day period, a new application, accompanied by the required application and commitment fee, must be submitted.

(h) *Transfer fee.* Upon application for approval of a transfer of physical assets or the substitution of mortgagors, a transfer fee of 50 cents per thousand dollars shall be paid on the original face amount of the mortgage in all cases, except that a transfer fee shall not be paid where both parties to the transfer transaction are nonprofit organizations.

(i) *Refund of fees.* If the amount of the commitment issued or increase in mortgage granted is less than the amount applied for, the Commissioner shall refund the excess amount of the application and commitment fees submitted by the applicant. If an application is rejected before it is assigned for processing, or in such other instances as the Commissioner may determine, the entire application and commitment fee or any portion thereof may be returned to the applicant. Commitment, inspection and reopening fees may be refunded, in whole or in part, if it is determined by the Commissioner that there is a lack of need for the housing or that the construction or financing of the project has been prevented because of condemnation proceedings or other legal action taken by a governmental

body or public agency, or in such other instances as the Commissioner may determine. A transfer fee may be refunded only in such instances as the Commissioner may determine.

(j) *Fees not required.* The payment of an application, commitment, inspection, or reopening fee shall not be required in connection with the insurance of a mortgage involving the sale by the Secretary of any property acquired under any section or title of the Act.

Dated: June 22, 1993.

Nicholas P. Retsinas,

Assistant Secretary for Housing—Federal Housing Commissioner.

[FR Doc. 93–15542 Filed 6–30–93; 8:45 am]

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federal register

Thursday
July 1, 1993

Part V

Department of Health and Human Services

Administration for Children and Families

Family Violence Prevention and Services Discretionary Funds Program; Notice

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

[Program Announcement No. OCS 93-08]

Fiscal Year 1993 Family Violence Prevention and Services Discretionary Funds Program; Availability of Funds and Request for Applications

AGENCY: Office of Community Services, Administration for Children and Families (ACF), Department of Health and Human Services.

ACTION: Announcement of the availability of funds and request for applications under the Office of Community Services Family Violence Prevention and Services Program.

SUMMARY: The Office of Community Services (OCS) announces its Family Violence Prevention and Services discretionary funds program for fiscal year (FY) 1993. Funding for grants under this announcement is authorized by the "Child Abuse, Domestic Violence, Adoption, and Family Services Act of 1992," Public Law 102-295, governing discretionary programs for family violence prevention and services. This announcement contains all forms and instructions for submitting an application.

DATES: The closing date for submission of applications is August 16, 1993.

ADDRESSES: Application receipt point: Department of Health and Human Services, Administration for Children and Families/Division of Discretionary Grants, (OCS-93-08) 370 L'Enfant Promenade, S.W., 6th Floor, Washington, D.C. 20447.

FOR FURTHER INFORMATION CONTACT: William Riley, Administration for Children and Families, Office of Community Services, Division of State Assistance, 370 L'Enfant Promenade, SW., Washington, DC 20447. Telephone (202) 401-9233.

SUPPLEMENTARY INFORMATION: The Office of Community Services, Administration for Children and Families, announces the applications are being accepted for funding for FY 1993 projects on Public Information/Community Awareness for the Prevention of Domestic Violence; projects for Improved Access and Legal Representation for Victims of Domestic Violence; and for a National Resource Center for Family Violence Prevention and Services, and Special Issue Resource Centers for Training, Information and Technical Assistance.

This program announcement consists of four parts. Part I provides information on the family violence program and the statutory funding authority applicable to this announcement.

Part II describes the three priority areas under which applications for FY 1993 violence funding are being requested.

Part III describes the review process.

Part IV provides information and instructions for the development and submission of applications.

The forms to be used for submitting an application follow Part IV. Please copy and use these forms in submitting an application under this announcement. *No additional application materials are available or needed to submit an application.*

Applicants should note that grants and cooperative agreements to be awarded under this program announcement are subject to the availability of funds.

Part I. Introduction

Title III of the Child Abuse Amendments of 1984, (Pub. L. 98-457, 42 U.S.C. 10401, et seq.) is entitled the Family Violence Prevention and Services Act (Act). It was first implemented in FY 1986 and reauthorized and amended for fiscal years 1993 through 1995 by Congress on May 28, 1992 by Public Law 102-295. Funds under this Act are awarded to States and Indian Tribes to assist in supporting programs and projects to prevent incidents of family violence and to provide immediate shelter and related assistance for victims of family violence and their dependents.

Family violence prevention funds have served to supplement many already established community-based family violence prevention and service activities. These funds also have allowed States and Tribes to expand current service programs and establish additional new centers in rural and underserved areas, on Native American Reservations, and in Alaskan Native Villages and Regional Corporation areas. In most areas, there is private sector as well as State and local funding for these emergency shelters.

The Department, through the Family Violence Prevention and Services Act, has provided technical assistance grants to several State Coalitions Against Domestic Violence, and to several nonprofit organizations to assist shelter operators and service providers to improve their service delivery, and also to support better planning, coordination and information exchange.

In addition to the grants that were initially made available in FY 1986, the Department also has supported: the operation of the Clearinghouse on Family Violence Information; research activities with the Department of Justice; regionally based training and technical assistance for State and local law enforcement personnel through the Department of Justice; and grants for technical assistance and training for State and local public and private nonprofit agencies administering the family violence program.

During FY 1991 and FY 1992, the Department made grant awards that enhanced public information and community awareness strategies and activities. These awards also served as models for the prevention of family violence and provided information on resources, facilities, and alternatives to family violence victims and their dependents, community organizations, local school districts, and individuals seeking assistance.

Part II. Fiscal Year 1993 Family Violence Projects

1. Priority Area Number FV 01-93

Public Information/Community Awareness Campaign Projects for the Prevention of Family Violence.

Purpose: To assist in the development of public information and community awareness campaign projects and activities that will serve as information models for the prevention of family violence. These projects should provide information on resources, facilities, and service alternatives available to family violence victims and their dependents, community organizations, local school districts, and other individuals seeking assistance.

Eligible Applicants: State agencies, Territories, and Native American Tribes and Tribal Organizations who are, or have been, recipients and Family Violence Prevention and Services Act grants; State and local private non-profit agencies experienced in the field of family violence prevention; and public and private non-profit educational institutions, community organizations and community-based coalitions, and other entities that have designed and implemented family violence prevention information activities or community awareness strategies.

Background: Based on the encouraging response to the announcement for public information and community awareness grants for family violence prevention in FY 1992, ACF plans to again make these grants available in FY 1993. Current surveys and research studies have indicated that all too often within families the response to stressful situations tends to be physically or emotionally violent. There are data which substantiate the

inference that the violent response to conflicts or stressful situations may be a "learned" response, an adaptive and modeled behavior used to control or extricate a person from a particularly stressful situation.

It also has been shown, particularly in anecdotal reports, that there are victims of family violence still unaware of sources of assistance that may be available in their communities. Victims and batterers alike have indicated that they remained in their situations or felt powerless to change because they were uninformed of their options or of the community resources that may have assisted them. We also may assume that the so-called "new minorities" (e.g., Southeast Asians, Central Americans) may have both language and cultural barriers to surmount in sorting out the matrix of services, laws, and community mores in dealing with family violence. Moreover, the African American and Hispanic communities often have complained that, in general, they do not receive the most current or accurate information on available services or facilities.

The goal of this priority area is to add credible and persuasive information to the arsenal of weapons necessary to break the so-called "cycle of family violence." By assuring that individuals, particularly within minority communities, are aware of available resources and alternative responses for the prevention of violence, we also may demonstrate a model that provides for a more informed individual and a prevention strategy responsive to aggressive and stressful situations.

The focus of this priority area requires the development of an innovative public information campaign model that may be used by public and private agencies, schools, churches, boys and girls clubs, community organizations, and individuals. By simply increasing the amount of information on services and other alternatives for the prevention of family violence, we provide the victims, their dependents, and perpetrators, with options for their particular situations.

Accurate information is critical to any community awareness strategy and activity. How information is communicated must be modified where communication barriers may exist because of perceived or real language differences and cultural insensitivities.

Minimum Requirements for Project Design: In order to successfully compete under the priority area, the applicant should:

- Present a plan for the prevention of family violence that clearly reflects how the applicant would coordinate with public agencies and with other community organizations and institutions active in the field of family violence prevention.
- Describe, as an element of the plan, a proposed model approach to the development of a public information campaign and identify the specific audiences, communities, and groups that will be educated in the prevention of family violence.
- Include, as critical elements in the plan:
- The development and use of non-traditional sources as information providers (applicants should present specific plans for the use of local organizations, businesses and individuals in the distribution of information and materials);
- The identification of the media to be used in the campaign and the geographic distribution of the campaign;
- How the applicant would be responsive to and demonstrate its sensitivity to minority communities and their cultural perspectives;
- A set of achievable objectives and a description of the population groups, relevant geographic area, and the evaluation components to be used to measure progress and the overall effectiveness of the campaign; and
- Provide a description of the kind, volume, distribution and timing of the proposed information with assurances that the public information campaign activities will not supplant or lower the current frequency of public service announcements.

Project Duration: The length of the project should not exceed 12 months.

Federal Share of the Project: The maximum Federal share of the project is not to exceed $35,000 for the 1-year project period. Applications for lesser amounts also will be considered under this priority area.

Matching Requirement: Grantees must provide at least 25 percent of the total cost of the project. The total approved cost of the project is the sum of the ACF share and the non-Federal share. The non-Federal share may be met by cash or in-kind contributions, although applicants are encouraged to meet their match requirements through cash contributions. Therefore, a project requesting $35,000 in Federal funds must include a match of at least $8,750.

Anticipated Number of Projects to be Funded: It is anticipated that fourteen projects will be funded at the maximum level; more than fourteen projects may be funded depending on the number of acceptable applications for lesser amounts which are received.

CFDA: 93.671 Family Violence Prevention and Services: Family Violence Prevention and Services Act, as amended.

2. Priority Area Number FV-02-93

Demonstration Training Models for Improved Access and Legal Representation for Victims of Domestic Violence.

Purpose: To design and implement a demonstration model/course to train State (including city and county) prosecutors to successfully try cases of domestic violence. These models, when implemented, should enhance prosecutor's skills in handling domestic violence cases. The training should incorporate the cooperative use of law enforcement organizations and victims advocacy groups in the design and implementation of the program.

Eligible Applicants: State, Territories, and local private nonprofit agencies and organizations experienced in the field of legal education, with particular expertise in the planning and implementation of training programs for law enforcement officials in the domestic violence area. Applicants must provide documentation of the required expertise and experience in this area. Applicants also must provide letters of support and commitment for the proposed project from their respective State's Department of Public Safety and the State agency designated as the recipient of the Family Violence Prevention and Services Act funds.

Background: The prevalence of domestic violence is a documented and public fact. The national crime index indicates we are in the midst of a domestic violence epidemic, cutting across all racial and socioeconomic groups. Available information indicates that the majority of domestic violence victims are women.

According to the Surgeon General's report, battering is the single largest cause of injury to women in the United States. Battering is a systematic pattern of violent, controlling, and coercive behaviors employed by an abusive person to threaten, frighten, injure and ultimately control the thoughts, beliefs, and behaviors of the victim of this violence.

In the past, the Department of Health and Human Services has joined with the Department of Justice in support of training for law enforcement officials in the means of combating domestic violence through policy development and the training of frontline law enforcement officers. These nation-wide training projects were planned and implemented by national organizations, representative of law enforcement agencies and organizations.

Beginning in FY 1993, we seek to initiate projects that will continue the support for training in the law enforcement community and which are appropriate for the Department's expanded training and technical assistance activities. The ultimate goal of this activity is the effective legal representation of domestic violence victims. In our efforts to achieve that goal we need to determine what specific legal training and technical assistance approaches can be most effective.

Minimum Requirements for Project Design: In order to compete successfully in this priority area the applicant should develop a plan which:

• Includes, as a critical element, a description of the course format and curriculum citing the various methods and techniques relating to prosecuting cases of domestic violence.

• Describes, as another critical element, the topics that should be discussed in the course/training and describes how and to what extent victim advocacy organizations and law enforcement officials will be involved in the development of the curriculum and implementation.

• Describes the proposed efforts and the commitment to replication of the demonstration program on a State-wide basis and the extent advocacy groups and law enforcement officials will assist in its dissemination.

• *Project Duration*: The length of the project should not exceed 12 months.

• *Federal Share of the Project*: The maximum Federal share of the project is not to exceed $35,000 for the 1-year project period. Applications for lesser amounts also will be considered for this project.

• *Matching Requirement*: Grantees must provide at least 25 percent of the total cost of the project. The total approved cost of the project is the sum of the ACF share and the non-Federal share. The non-Federal share may be met by cash or in-kind contributions, although applicants are encouraged to meet their match requirements through cash contributions. Therefore, a project requesting $35,000 in Federal funds must include a match of at least $8,750.

Anticipated Number of Projects to be Funded: It is anticipated that six projects will be funded at the maximum level; more than six projects may be funded depending upon the number of acceptable applications for lesser amounts which are received.

CFDA: 93.671 Family Violence Prevention and Services: Family Violence Prevention and Services Act, as amended.

3. Priority Area Number FV–03–93

National Resource Center for Family Violence Prevention and Services, and Special Issue Resource Centers for Information, Training, and Technical Assistance

Purpose: The purpose of the National Resource Center and the Special Issue Resource Centers is to provide resource information, training, and technical assistance to Federal, State, and Indian Tribal agencies, as well as to local domestic violence programs and to other professionals who provide services to victims of domestic violence.

The statute requires that the Department establish and maintain a National Resource Center for Family Violence Prevention and Services (NRC) and up to six Special Issue Resource Centers (SIRCs), (see section 308(a)(2)).

On a nationwide basis, a network composed of the NRC and the SIRCs will offer resource, policy, and training assistance to Federal, State, and local government agencies, to domestic violence service providers, and to other professional and interested parties on issues pertaining to domestic violence. The NRC will maintain a central resource library in order to collect, prepare, analyze, and disseminate information and statistics relating to the incidence and prevention of family violence and the provision of immediate shelter and related assistance. The SIRCs shall provide a specialization, on a nationwide basis, in at least one area of domestic violence service, prevention, or law.

Eligible applicants: Private nonprofit organizations that focus primarily on domestic violence. Applicants must have documented organizational experience in the area of domestic violence in the specific subject area for which it is applying. The applicant must have an advisory board and the applicant's advisory board representation should be diverse geographically as well as culturally. Applicants must be able to demonstrate strong support for their proposed efforts from domestic violence advocates from across the country and the region for their designation as a national or special issue resource center.

Background: To comply with the NRC mandate, the Office of Community Services seeks to support a nationwide effort that is staffed by an expert multi-disciplinary team that can respond to requests for resource, policy, and training assistance from individuals, agencies and organizations at the Federal, State and local levels.

Because of our concerns for administrative efficiency, ACF has concluded that the desired effective relationships and anticipated coordination between the NRC and the SIRCs will be greatly enhanced with the establishment and maintenance of three (3) SIRCs. A review of section 308 indicates that there are proposed areas of domestic violence service, prevention, or law that clearly overlap and may be combined with no loss of emphasis. The proposed three SIRCs will provide leadership, resource information and materials, training, technical assistance and professional consultation in the following areas of domestic violence, prevention, and services:

(1) Special Issue Resource Center for Domestic Violence: Civil and Criminal Justice

(a) Criminal justice responses to domestic violence, including court-mandated abuser treatment.

(b) The use of the self-defense plea by domestic violence victims.

(c) Improving access to and the quality of legal representation for victims of domestic violence in civil litigation.

(ii) Special Issue Resource Center for Domestic Violence: Child Protection and Custody

(a) Improving the response of Child Protective Service agencies to battered mothers of abused children.

(b) Child custody issues in domestic violence cases.

(iii) Special Issue Resource Center for Domestic Violence: Health Care and Access

Improving interdisciplinary health care responses and access to health care resources for victims of domestic violence.

Considered together, the National Resource Center and the Special Issue Resource Centers will constitute a domestic violence prevention network and will provide assistance to Federal, State and local agencies, organizations and individuals involved in domestic violence prevention, identification, services, and treatment in related areas. To that end, questions related to the type and extent of the assistance needed by the field must be addressed. In addition, questions related to the shared use of current electronic capabilities, how the assistance and support for the field may be best communicated, and questions relative to the state-of-the-art on prevention, identification, treatment, and services in domestic violence must also be discussed.

Additionally, the provision of assistance and consultation must be conducted in a manner that takes into account varying circumstances, e.g., conditions in the field, and the target

populations to be addressed. This level of responsiveness and sensitivity requires that questions of flexibility, options for services delivery, cost, and the appropriateness of content be addressed.

It is expected that on a nationwide basis the NRC would have a knowledge building and dissemination capacity and exhibit a systematic approach to developing issues for the field in close cooperation with the Special Issue Resource Centers. To that end, the NRC would assume a leadership role in the compilation, analysis, and synthesis of research, including that funded by Federal, State, and local agencies, foundations, advocacy organizations, professional associations and universities; convene work groups and conferences and publish and disseminate proceedings on the state-of-the-art in selected areas of research, demonstrations, and intervention techniques; identify areas where additional information and research is needed to complement policy and practice and suggest next steps for additional data compilation, innovative demonstrations, program administration, and service program evaluations.

The Special Issue Resource Centers would have the ability to deliver highly individualized technical assistance which enables a user to solve a specific problem. In addition to on-site assistance, the SIRCs would identify, develop, and disseminate findings and technical assistance packages for replication of effective services, prevention and training programs; and identify new areas of demonstration and services improvement needed to address domestic violence issues in their respective topical areas.

The Office of Community Services intends to support a National Resource Center for Family Violence Prevention and three Special Issue Resource Centers through Cooperative Agreements. (A Cooperative Agreement is Federal financial aid in which substantial Federal involvement is anticipated. The respective responsibilities of Federal staff and project staff will be identified and agreed upon prior to award.)

Applicants may apply to provide National Resource Center services, or Special Issue Resource Center services and may submit applications for more than one center. However, in the event that the applicant does apply for more than one center, a separate application for each center would be required. Applicants must clearly indicate whether funding is being sought to support the National Resource Center or the Special Issue Resource Centers. When applying for the Special Issue Resource Centers, the applicant must specify the topical area(s) being addressed.

National Resource Center for Domestic Violence Prevention and Services

Specific areas related to the efforts of the National Resource Center will include:

(i) Identifying emerging domestic violence issues and preparing information and policy papers addressing such issues;

(ii) Identifying, documenting and developing innovative or exemplary resources, and assisting the field in adapting such resources to specific needs; and

(iii) Maintaining a central resource library to collect, prepare, analyze, and disseminate information and statistics.

Specific areas related to the efforts of the Special Issue Resource Centers will include:

(i) Identifying, documenting and developing innovative training curricula, materials and manuals for specific program needs;

(ii) Providing technical assistance, training and consultation to improve program administration, service delivery, and to promote the utilization of resources and state-of-the-art techniques related to domestic violence, including methods and techniques for program implementation and evaluation; and

(iii) Developing a network of professionals in domestic violence and coordinating the input and experiences of these individuals with persons, programs or agencies requesting assistance or information.

Minimum Requirements for Project Design

In order to successfully compete under this announcement, the applicant should:

For the National Resource Center

Outline a plan of interaction with OCS for implementation under a cooperative agreement including, as appropriate, activities involving Headquarters agency staff.

Describe the immediacy of the need to be addressed and provide information on the specific services the NRC proposes to provide to the field.

Present the technical approach and the specific workplans for the provision of assistance to the field that is nationwide in scope and that include the use of an advisory board; a plan for continued contact with the field, including, if appropriate, an 800 telephone number and direct mailings; a plan for the effective use of electronic communication capability; and a plan for the development and use of a network of experts and for the provision of direct training and consultation, including fees for service, if necessary.

Describe the efforts that would be undertaken to coordinate the NRC activities with national advocacy groups and domestic violence organizations, other national resource centers and clearinghouses, and Federal and State government agencies; identify the organizations and how coordination with them will enhance that NRC's activities and avoid the duplication of efforts.

Provide a plan to determine the need for and to implement special projects relating to policy issues, training curricula, service delivery models or other aspects of services related to services for or the prevention of domestic violence.

Provide a plan to evaluate the efficiency and effectiveness of proposed project activities, and a plan for evaluating and reporting on the effectiveness of the project 6 months after the effective date of the grant.

Describe the proposed NRC staff with appropriate expertise who would provide assistance.

Describe the administrative and organizational structure, the management plan, and the cost structure within which the project would operate; describe the administrative, operational and organizational relationships to be established with the SIRCs that will constitute an effective national network in the domestic violence areas. Charts depicting these structures and the ensuing relationships must be included.

Project Period: The length of the project for the National Resource Center must not exceed 36 months.

Budget Period and Federal Share: The maximum Federal share for the National Resource Center is not to exceed $840,000 for the first 12-month budget period or a maximum of $1.84 million for a 3-year project period based on the availability of funds.

Matching Requirement: Grantees must provide at least 25 percent of the total cost of the project. The total approved cost of the project is the sum of the ACF share and the non-Federal share. The non-Federal share may be met by cash or in-kind contributions, although applicants are encouraged to meet their match requirements through cash contributions. Therefore, a project requesting $1,840,000 in Federal funds (based on an award of $633,000, per budget period) must include a match of

at least $460,000 (25 percent of total project cost).

Anticipated Number of Projects to be Funded: It is anticipated that one project will be funded, the National Resource Center for Family Violence Prevention.

For the Special Issue Resource Centers

Outline a plan of interaction with OCS for implementation under a cooperative agreement including, as appropriate, activities involving Headquarters agency staff.

Demonstrate an in-depth understanding of the program/service and access/response issues of the particular SIRC(s) and the problems associated with them.

Describe the immediacy of the need to be addressed and provide information on the specific training and technical assistance services the SIRC(s) would provide to the field.

Present the technical approach and the specific workplans for the provision of training and technical assistance to the field that is nationwide in scope and utilizes the support and facilitating efforts of the NRC; describe a plan for continuous contact with the field, an 800 telephone number and direct mailings; and a plan for the development and use of a network of experts and for the provision of direct training and consultation, including fees for service, if necessary.

Describe the efforts that would be undertaken to coordinate activities with appropriate resources centers, domestic violence advocacy organizations, public agencies, the National Resource Center and affiliated Special Issue Resource Centers in the network to enhance the Center's activities and to avoid duplication.

Provide a plan to determine the need for and to implement special projects related to training curricula, service delivery models or other aspects of the proposed SIRC topic.

Provide a plan to evaluate the efficiency and effectiveness of the proposed project activities within 6 months of the effective date of the grant.

Describe the proposed SIRC staff with appropriate expertise who would provide assistance.

Describe the administrative and organizational structure, the management plan, and the cost structure within which the project would operate; describe the operational and programmatic relationships to be formed with the affiliated SIRCs and the NRC.

Charts depicting the organizational structures and the ensuring relationships must be included.

Project Period: The length of the projects for the Special Issue Resource Centers must not exceed 36 months.

Budget Period and Federal Share: The maximum Federal share for each of the three Special Issue Resource Centers is not to exceed $335,000 for the first 12-month budget period or a maximum of $735,000 for a 3-year project period.

Matching Requirement: Grantees must provide at least 25 percent of the total cost of the project. The total approved cost of the project is the sum of the ACF share and the non-Federal share. The non-Federal share maybe met by cash or in-kind contributions, although applicants are encouraged to meet their match requirements through cash contributions. Therefore, a project requesting $735,000 in Federal funds (based on an award of $245,000, per budget period), must include a match of at least $183,750 (25 percent of total project cost).

Anticipated Number of Projects to be Funded: It is anticipated that three Special Issue Resource Center projects will be funded, i.e., one each in the areas of Civil and Criminal Justice, Child Protection and Custody, and Health Care and Access.

CFDA: 93.671 Family Violence Prevention and Services: Family Violence Prevention and Services Act, as amended.

Part III—The Review Process

A. Eligible Applicants

Before applications are reviewed, each application will be screened to determine that the applicant organization is an eligible applicant as specified under the selected priority area. Applications from organizations which do not meet the eligibility requirements for the priority area will not be considered or reviewed in the competition, and the applicant will be so informed.

Each priority area description contains information about the types of agencies and organizations which are eligible to apply under that priority area. Since eligibility varies among priority areas depending on statutory provisions, it is critical that the "Eligible Applicants" section under each specific priority area be read carefully.

Only agencies and organizations, not individuals, are eligible to apply under any of the priority areas. On all applications developed jointly by more than one agency or organization, the applications must identify only one organization as the lead organization and official applicant. The other participating agencies and organizations can be included as co-participants, subgrantees or subcontractors.

For-profit organizations are also eligible to participate as subgrantees or subcontractors with eligible public or private non-profit organizations under all of the priority areas.

Any non-profit agency which has not previously received an award from the U.S. Department of Health and Human Services must submit proof of non-profit status with its grant application. The non-profit agency can accomplish this by either making reference to its listing in the Internal Revenue Service's (IRS) most recent list of tax-exempt organizations or submitting a copy of its letter from the IRS under IRS Code Section 501(c)(3). ACF cannot fund a non-profit applicant without acceptable proof of its non-profit status.

B. Review Process and Funding Decisions

Applications that are postmarked by the deadline date and are from eligible applicants will be reviewed and scored competitively. Experts in the field, generally persons from outside of the Federal government, will use the appropriate evaluation criteria listed later in this part to review and score the applications. The results of this review are a primary factor in making funding decisions.

OCS reserves the option of discussing applications with, or referring them to, other Federal or non-Federal funding sources when this is determined to be in the best interest of the Federal government or the applicant. It may also solicit comments from ACF Regional Office staff, other Federal agencies, interested foundations, national organizations, specialists, experts, States and the general public. These comments, along with those of the expert reviewers, will be considered by OCS in making funding decisions.

In making decisions on awards, OCS may give preference to applications which focus on or feature: minority populations; a substantially innovative strategy with the potential to improve theory or practice in the field of human services; a model practice or set of procedures that holds the potential for replication by organizations involved in the administration or delivery of human services; substantial involvement of volunteers; substantial involvement (either financial or programmatic) of the private sector; a favorable balance between Federal and non-Federal funds available for the proposed project; the potential for high benefit for low Federal investment; a programmatic focus on those most in need; and/or substantial involvement in the proposed

project by national or community foundations.

To the extent possible, efforts will be made to ensure that funding decisions reflect an equitable distribution of assistance among the States and geographical regions of the country, rural and urban areas, and ethnic populations. In making these decisions, OCS may also take into account the need to avoid unnecessary duplication of effort.

C. Evaluation Criteria

Using the appropriate evaluation criteria below a panel of at least three reviewers (primarily experts from outside the Federal government) will review each application. Applicants should ensure that they address each minimum requirement in the priority area description under the appropriate section of the Program Narrative Statement.

Reviewers will determine the strengths and weaknesses of each proposal in terms of the appropriate evaluation criteria listed below, provide comments and assign numerical scores. The point value following each criterion heading indicates the maximum numerical weight that each section may be given in the review process.

Review Criteria for All Priority Areas

Applications under all priority areas will be evaluated against the following criteria.

1. *Objectives and Need for the Project (20 points).* State the specific objectives and needs addressed by the project in terms of its national or regional significance, its theoretical importance, its applicability to policy and practice. Provide a detailed discussion of the "state-of-the-art relative to the problem or area addressed by the proposal and indicate how the proposed effort will impact on it. State the goals or service objectives of the proposal. Provide supporting documentation or other testimonies from concerned interests other than the applicant. Summarize, evaluate and relate relevant data, based on planning or demonstration studies to the proposed project. The application must identify the specific topics or program areas to be served by the proposed project. Maps and other graphic aids may be attached.

2. *Results or Benefits Expected (20 points).* The extent to which the application identifies the results and benefits to be derived, the extent to which they are consistent with the objectives of the proposal, the extent to which the application indicates the anticipated contributions to policy, practice, and theory, and the extent to which the proposed project costs are reasonable in view of the expected results. Identify, in specific terms, the results and benefits, for target groups and human service providers, to be derived from implementing the proposed project. Describe how the expected results and benefits will relate to previous demonstration efforts. Describe in detail evaluation plans and procedures which are capable of measuring the degree to which the project objectives have been accomplished.

3. *Approach (35 points).* The extent to which the application outlines a sound and workable plan of action pertaining to the scope of the project, and details how the proposed work will be accomplished; relates each task to the objectives and identifies the key staff member who will be the lead person; provides a chart indicating the timetable for completing each task, the lead person, and the time committed; cites factors which might accelerate or decelerate the work, giving acceptable reasons for taking this approach as opposed to others; describes and supports any unusual features of the project, such as design or technological innovations, reductions in cost or time, or extraordinary social and community involvements; and provides for projections of the accomplishments to be achieved.

The extent to which, when applicable, the application describes the evaluation methodology that will be used to determine if the needs identified and discussed are being met and if the results and benefits identified are being achieved. The application also lists each organization, agency, consultant, or other key individuals or groups who will work on the project, along with a description of the activities and nature of their effort or contribution.

4. *Level of Effort: (25points). Staffing pattern*—Describe the staffing pattern for the proposed project, clearly linking responsibilities to project tasks and specifying the contributions to be made by key staff.

Competence of staff—Describe the qualifications of the project team including any experiences working on similar projects. Also, describe the variety of skills to be used, relevant educational background and the demonstrated ability to produce final results that are comprehensible and usable. One or two pertinent paragraphs on each key member are preferred to vitae/resumes. However, vita/resumes may be included in the ten pages allowed for attachments/appendices.

Adequacy of resources—Specify the adequacy of the available facilities, resources and organizational experience with regard to the tasks of the proposed project. List the financial, physical and other sources to be provided by other profit and nonprofit organizations. Explain how these organizations will participate in the day to day operations of the project.

Budget—Relate the proposed budget to the level of effort required to obtain project objectives and provide a cost/benefit analysis. Demonstrate that the project's costs are reasonable in view of the anticipated results.

Collaborative efforts—Discuss in detail and provide documentation for any collaborative or coordinated efforts with other agencies or organizations. Identify these agencies or organizations and explain how their participation will enhance the project. Letters from these agencies and organizations discussing the specifics of their commitment must be included in the application.

Authorship—The authors of the application must be clearly identified together with their current relationship to the applicant organization and any future project role they may have if the project is funded.

Applicants should note that non-responsiveness to the section "*Minimum Requirements for Project Design*" will result in a low evaluation score by the panel of expert reviewers. Applicants must clearly identify the specific priority area under which they wish to have their applications considered, and tailor their applications accordingly. Previous experience has shown that an application which is broader and more general in concept than outlined in the priority area description is less likely to score as well as one which is more clearly focused on and directly responsive to the concerns of that specific priority area.

D. Available Funds

OCS intends to award new grants and cooperative agreements resulting from this announcement during the fourth quarter of FY 1993. The size of the actual awards will vary. Each priority area description includes information on the maximum Federal share of the project costs and the anticipated number of projects to be funded.

The term "budget period" refers to the interval of time (usually 12 months) into which a multi-year period of assistance (project period) is divided for budgetary and funding purposes. The term "project period" refers to the total time a project is approved for support, including any extensions.

Where appropriate, applicants may propose project periods which are shorter than the maximums specified in

the various priority areas. Non-Federal share contributions may exceed the minimums specified in the various priority areas when the applicant is able to do so.

For multi-year projects, continued Federal funding beyond the first budget period is dependent upon proof of satisfactory performance and the availability of funds from future appropriations.

E. Grantee Share of Project Costs

Federal funds will be provided to cover up to 75% of the total allowable project costs. Therefore, the non-Federal share must amount to at least 25% of the total (Federal plus non-Federal) project cost. This means that, for every $3 in Federal funds received, up to the maximum amount allowable under each priority area, applicants must contribute at least $1.

For example, the cost breakout for a project costing $100,000 to implement would be:

Federal request	Non-Federal share	Total cost
$75,000 75%	$25,000 25%	$100,000 100%

Part IV—Instructions for the Development and Submission of Applications

This Part contains information and instructions for submitting applications in response to this announcement. Application forms are provided as part of this publication along with a checklist for assembling an application package. Please copy and use these forms in submitting an application.

Potential applicants should read this section carefully in conjunction with the information contained within the specific priority area under which the application is to be submitted. The priority area descriptions are in Part II.

A. Required Notification of the State Single Point of Contact

This program is covered under Executive Order 12372, (E.O.) "Intergovernmental Review of Federal Programs," and 45 CFR Part 100, "Intergovernmental Review of Department of Health and Human Services Program and Activities." Under the E.O., States may design their own processes for reviewing and commenting on proposed Federal assistance under covered programs.

All States and territories, except Alabama, Alaska, Idaho, Kansas, Louisiana, Minnesota, Nebraska, Oklahoma, Oregon, Pennsylvania, Virginia, Washington, American Samoa and Palau, have elected to participate in the E.O. process and have established a Single Point of Contact (SPOC). Applicants from these fourteen jurisdictions need take no action regarding E.O. 12372. Applicants for projects to be administered by Federally-recognized Indian Tribes are also exempt from the requirements of E.O. 12372. Otherwise, applicants should contact their SPOCs as soon as possible to alert them of the prospective applications and receive any necessary instructions. Applicants must submit any required material to the SPOCs as soon as possible so that OCS can obtain and review SPOC comments as part of the award process. It is imperative that the applicant submit all required materials, if any, to the SPOC and indicate the date of this submittal (or the date of contact if no submittal is required) on the Standard Form 424, item 16a.

Under 45 CFR 100.8(a)(2), a SPOC has 45 days from application deadline to comment on proposed new or competing continuation awards.

SPOCs are encouraged to eliminate the submission of routine endorsements as official recommendations. Additionally, SPOCs are requested to differentiate clearly between mere advisory comments and those official State process recommendations which may trigger the "accommodate or explain" rule.

When comments are submitted directly to ACF, they should be addressed to: Department of Health and Human Services, Administration for Children and Families, Division of Discretionary Grants, (OCS–93–08) 370 L'Enfant Promenade, SW, 6th Floor, Washington, DC 20447.

A list of the Single Points of Contact for each State and Territory is included at the end of this announcement.

B. Deadline for Submittal of Applications

The closing date for submittal of applications under this program announcement is found at the beginning of this program announcement under **DATES**. Applications shall be considered as meeting the announced deadline if they are either:

1. Received on or before the deadline date at the Department of Health and Human Services, Administration for Children and Families, Division of Discretionary Grants (OCS–93–08) 370 L'Enfant Promenade, SW., 6th Floor, Washington, DC 20447, or

2. Sent on or before the deadline date and received by OCS in time to be considered during the competitive review process.

Applications must be postmarked no later than the date to be found at the beginning of the Program Announcement under **DATES**. When mailing proposal packages, applicants are strongly advised to obtain a legibly dated receipt from a commercial carrier (such as UPS, Federal Express, etc.) or from the U.S. Postal Service as proof of mailing by the deadline date. Private metered postmarks are not acceptable as proof of timely mailing.

Late applications: Applications which do not meet the criteria under Deadlines are considered late applications. The ACF shall notify each late applicant that its application will not be considered in the current competition.

Extension of deadlines: The ACF reserves the right to extend the deadline for all applicants due to acts of God, such as floods, hurricanes, or earthquakes; if there is widespread disruption of the mail; or if OCS determines a deadline extension to be in the best interest of the Government. However, OCS will not waive or extend the deadline for any applicant unless the deadline is waived or extended for all applicants.

C. Instructions for Preparing the Application and Completing Application Forms

The SF 424, SF 424A, SF 424A, Page 2 and certifications have been reprinted for your convenience in preparing the application. You should reproduce single-sided copies of these forms from the reprinted forms in the announcement, typing your information onto the copies. Please do not use forms directly from the **Federal Register** announcement, as they are printed on both sides of the page.

In order to assist applicants in correctly completing the SF 424 and SF 424A, instructions for these forms have been included at the end of Part IV of this announcement.

Where specific information is not required under this program, NA (not applicable) has been preprinted on the form.

Please prepare your application in accordance with the following instructions:

1. *SF 424 Page 1, Application Cover Sheet*

Please read the following instructions before completing the application cover sheet. An explanation of each item is included. Complete only the items specified.

Top of Page. Enter the single priority area number under which the application is being submitted. An

application should be submitted under only one priority area.

Item 1. "Type of Submission"—Preprinted on the form.

Item 2. "Date Submitted" and "Applicant Identifier"—Date application is submitted to ACF and applicant's own internal control number, if applicable.

Item 3. "Date Received By State"—State use only (if applicable).

Item 4. "Date Received by Federal Agency"—Leave blank.

Item 5. "Applicant Information."

"Legal Name"—Enter the legal name of applicant organization. For applications developed jointly, enter the name of the lead organization only. There must be a single applicant for each application.

"Organizational Unit"—Enter the name of the primary unit within the applicant organization which will actually carry out the project activity. Do not use the name of an individual as the applicant. If this is the same as the applicant organization, leave the organizational unit blank.

"Address"—Enter the complete address that the organization actually uses to receive mail, since this is the address to which all correspondence will be sent. Do not include both street address and P.O. box number unless both must be used in mailing.

"Name and telephone number of the person to be contacted on matters involving this application (give area code)"—Enter the full name (including academic degree, if applicable) and telephone number of a person who can respond to questions about the application. This person should be accessible at the address given here and will receive all correspondence regarding the application.

Item 6. "Employer Identification Number (EIN)"—Enter the employer identification number of the applicant organization, as assigned by the Internal Revenue Service, including, if known, the Central Registry System suffix.

Item 7. "Type of Applicant"—Self-explanatory.

Item 8. "Type of Application"—Preprinted on the form.

Item 9. "Name of Federal Agency"—Preprinted on the form.

Item 10. "Catalog of Federal Domestic Assistance Number and Title"—Enter the Catalog of Federal Domestic Assistance (CFDA) number assigned to the program under which assistance is requested and its title, as indicated in the relevant priority area description.

Item 11. "Descriptive Title of Applicant's Project"—Enter the project title. The title is generally short and is descriptive of the project, not the priority area title.

Item 12. "Areas Affected by Project"—Enter the governmental unit where significant and meaningful impact could be observed. List only the largest unit or units affected, such as State, county, or city. If an entire unit is affected, list it rather than subunits.

Item 13. "Proposed Project"—Enter the desired start date for the project and projected completion date.

Item 14. "Congressional District of Applicant/Project"—Enter the number of the Congressional district where the applicant's principal office is located and the number of the Congressional district(s) where the project will be located. If statewide, a multi-State effort, or nationwide, enter "00."

Item 15. "Estimated Funding Levels"—In completing 15a through 15f, the dollar amounts entered should reflect, for a 17 month or less project period, the total amount requested. If the proposed project period exceeds 17 months, enter only those dollar amounts needed for the first 12 months of the proposed project.

Item 15a. Enter the amount of Federal funds requested in accordance with the preceding paragraph. This amount should be no greater than the maximum amount specified in the priority area description.

Item 15b-e Enter the amount(s) of funds from non-Federal sources that will be contributed to the proposed project. Items b-e are considered cost-sharing or "matching funds." The value of third party in-kind contributions should be included on appropriate lines as applicable. For more information regarding funding as well as exceptions to these rules, see Part III, Sections E and F, and the specific priority area description.

Item 15f. Enter the estimated amount of income, if any, expected to be generated from the proposed project. Do not add or subtract this amount from the total project amount entered under item 15g. Describe the nature, source and anticipated use of this income in the Project Narrative Statement.

Item 15q. Enter the sum of items 15a-15e.

Item 16a. Is Application Subject to Review By State Executive Order 12372 Process? Yes."—Enter the date the applicant contacted the SPOC regarding this application. Select the appropriate SPOC from the listing provided at the end of Part IV. The review of the application is at the discretion of the SPOC. The SPOC will verify the date noted on the application. If there is a discrepancy in dates, the SPOC may request that the Federal agency delay any proposed funding until September 30, 1993.

Item 16b. "Is Application Subject to Review By State Executive Order 12372 Process? No."—Check the appropriate box if the application is not covered by E.O. 12372 or if the program has not been selected by the State for review.

Item 17. "Is the Applicant Delinquent on any Federal Debt?"—Check the appropriate box. This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include audit disallowances, loans and taxes.

Item 18. "To the best of my knowledge and belief, all data in this application/preapplication are true and correct. The document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is awarded."—To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for signature of this application by this individual as the official representative must be on file in the applicant's office, and may be requested from the applicant.

Item 18a–c. "Typed Name of Authorized Representative, Title, Telephone Number"—Enter the name, title and telephone number of the authorized representative of the applicant organization.

Item 18d. "Signature of Authorized Representative"—Signature of the authorized representative named in Item 18a. At least one copy of the application must have an original signature. Use colored ink (not black) so that the original signature is easily identified.

Item 18e. "Date Signed"—Enter the date the application was signed by the authorized representative.

2. SF 424A—Budget Information—Non-Construction Programs

This is a form used by many Federal agencies. For this application, Sections A, B, C, E and F are to be completed. Section D does not need to be completed.

Sections A and B should include the Federal as well as the non-Federal funding for the proposed project covering (1) the total project period of 17 months or less or (2) the first year budget period, if the proposed project period exceeds 17 months.

Section A—Budget Summary. This section includes a summary of the budget. On line 5, enter total Federal costs in column (e) and total non-Federal costs, including third party in-kind contributions, but not program

income, in column (f). Enter the total of (e) and (f) in column (g).

Section B—Budget Categories. This budget, which includes the Federal as well as non-Federal funding for the proposed project, covers (1) the total project period of 17 months or less or (2) the first year budget period if the proposed project period exceeds 17 months. It should relate to item 15g, total funding, on the SF 424. Under column (5), enter the total requirements for funds (Federal and non-Federal) by object class category.

A separate budget justification should be included to explain fully and justify major items, as indicated below. The types of information to be included in the justification are indicated under each category. For multiple year projects, it is desirable to provide this information for each year of the project. The budget justification should immediately follow the second page of the SF 424A.

Personnel—Line 6a. Enter the total costs of salaries and wages of applicant/grantee staff. Do not include the costs of consultants, which should be included on line 6h, "Other."

Justification: Identify the project director, if known. Specify by title or name the percentage of time allocated to the project, the individual annual salaries, and the cost to the project (both Federal and non-Federal) of the organization's staff who will be working on the project.

Fringe Benefits—Line 6b. Enter the total costs of fringe benefits, unless treated as part of an approved indirect cost rate.

Justification: Provide a break-down of amounts and percentages that comprise fringe benefit costs, such as health insurance, FICA, retirement insurance, etc.

Travel—6c. Enter total costs of out-of-town travel (travel requiring per diem) for staff of the project. Do not enter costs for consultant's travel or local transportation, which should be included on Line 6h, "Other."

Justification: Include the name(s) of traveler(s), total number of trips, destinations, length of stay, transportation costs and subsistence allowances.

Equipment—Line 6d. Enter the total costs of all equipment to be acquired by the project. For State and local governments, including Federally recognized Indian Tribes, "equipment" is non-expendable tangible personal property having a useful life of more than two years and an acquisition cost of $5,000 or more per unit. For all other applicants, the threshold for equipment is $500 or more per unit. The higher threshold for State and local governments became effective October 1, 1988, through the implementation of 45 CFR part 92, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments."

Justification: Equipment to be purchased with Federal funds must be justified. The equipment must be required to conduct the project, and the applicant organization or its subgrantees must not have the equipment or a reasonable facsimile available to the project. The justification also must contain plans for future use or disposal of the equipment after the project ends.

Supplies—Line 6e. Enter the total costs of all tangible expendable personal property (supplies) other than those included on Line 6d.

Justification: Specify general categories of supplies and their costs.

Contractual—Line 6f. Enter the total costs of all contracts, including procurement contracts (except those which belong on other lines such as equipment, supplies, etc.) and contracts with secondary recipient organizations. Also include any contracts with organizations for the provision of technical assistance. Do not include payments to individuals on this line.

Justification: Attach a list of contractors, indicating the names of the organizations, the purposes of the contracts, and the estimated dollar amounts of the awards as part of the budget justification. Whenever the applicant/grantee intends to delegate part or all of the program to another agency, the applicant/grantee must complete this section (Section B, Budget Categories) for each delegate agency by agency title, along with the supporting information. The total cost of all such agencies will be part of the amount shown on Line 6f. Provide backup documentation identifying the name of contractor, purpose of contract, and major cost elements.

Construction—Line 6g. Not applicable. New construction is not allowable.

Other—Line 6h. Enter the total of all other costs. Where applicable, such costs may include, but are not limited to: insurance; medical and dental costs; noncontractual fees and travel paid directly to individual consultants; local transportation (all travel which does not require per diem is considered local travel); space and equipment rentals; printing and publication; computer use; training costs, including tuition and stipends; training service costs, including wage payments to individuals and supportive service payments; and staff development costs. Note that costs identified as "miscellaneous" and "honoraria" are not allowable.

Justification: Specify the costs included.

Total Direct Charges—Line 6i. Enter the total of Lines 6a through 6h.

Indirect Charges—Line 6j. Enter the estimated amount of indirect charges (costs). If no indirect costs are requested, enter "none." Generally, this line should be used when the applicant (except local governments) has a current indirect cost rate agreement approved by the Department of Health and Human Services or another Federal agency.

Local and State government should enter the amount of indirect costs determined in accordance with HHS requirements. When an indirect cost rate is requested, these costs are included in the indirect cost pool and should not be charged again as direct costs to the grant. In the case of training grants to other than State or local governments (as defined in title 45, Code of Federal Regulations, part 74), the Federal reimbursement of indirect costs will be limited to the lesser of the negotiated (or actual) indirect cost rate or 8 percent of the amount allowed for direct costs, exclusive of any equipment charges, rental of space, tuition and fees, post-doctoral training allowances, contractual items, and alterations and renovations.

For training grant applications, the entry under line 6j should be the total indirect costs being charged to the project. The Federal share of indirect costs is calculated as shown above. The applicant's share is calculated as follows:

(a) Calculate total project indirect costs (a*) by applying the applicant's approved indirect cost rate to the total project (Federal and non-Federal) direct costs.

(b) Calculate the Federal share of indirect costs (b*) at 8 percent of the amount allowed for total project (Federal and non-Federal) direct costs exclusive of any equipment charges, rental of space, tuition and fees, post-doctoral training allowances, contractual items, and alterations and renovations.

(c) Subtract (b*) from (a*). The remainder is what the applicant can claim as part of its matching cost contribution.

Justification: Enclose a copy of the indirect cost rate agreement. Applicants subject to the limitation on the Federal reimbursement of indirect costs for training grants should specify this.

Total—Line 6k. Enter the total amounts of lines 6i and 6j.

Program Income—Line 7. Enter the estimated amount of income, if any,

expected to be generated from this project. Do not add or subtract this amount from the total project amount.

Justification: Describe the nature, source, and anticipated use of program income in the Program Narrative Statement.

Section C—Non-Federal Resources. This section summarizes the amounts of non-Federal resources that will be applied to the grant. Enter this information on line 12 entitled "Totals." In-kind contributions are defined in title 45 of the Code of Federal Regulations, Part 74.51, as "property or services which benefit a grant-supported project or program and which are contributed by non-Federal third parties without charge to the grantee, the subgrantee, or a cost-type contractor under the grant or subgrant."

Justification: Describe third party in-kind contributions, if included.

Section D—Forecasted Cash Needs. Not applicable.

Section E—Budget Estimate of Federal Funds Needed For Balance of the Project. This section should only be completed if the total project period exceeds 17 months.

Totals—Line 20. For projects that will have more than one budget period, enter the estimated required *Federal* funds for the second budget period (months 13 through 24) under column "(b) First." If a third period will be necessary, enter the Federal funds needed for months 25 through 36 under "(c) Second." Columns (d) and (e) are not applicable in most instances, since ACF funding is almost always limited to a three-year maximum project period. They should remain blank.

Section F—Other Budget Information.

Direct Charges—Line 21. Not applicable.

Indirect Charges—Line 22. Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Remarks—Line 23. If the total project period exceeds 17 months, you must enter your proposed non-Federal share of the project budget for each of the remaining years of the project.

3. *Project Summary Description*

Clearly mark this separate page with the applicant name as shown in item 5 of the SF 424, and the title of the project as shown in item 11 of the SF 424. The summary description should not exceed 300 words. These 300 words become part of the computer database on each project.

Care should be taken to produce a summary description which accurately and concisely reflects the proposal. It should describe the objectives of the project, the approaches to be used and the outcomes expected. The description should also include a list of major products that will result from the proposed project, such as software packages, materials, management procedures, data collection instruments, training packages, or videos (please note that audiovisuals should be closed captioned). The project summary description, together with the information on the SF 424, will constitute the project "abstract." It is the major source of information about the proposed project and is usually the first part of the application that the reviewers read in evaluating the application.

4. *Program Narrative Statement*

The Program Narrative Statement is a very important part of an application. It should be clear, concise, and address the specific requirements mentioned under the priority area description in part II. The narrative should also provide information concerning how the application meets the evaluation criteria using the following headings:

(a) *Objectives and Need for the Project;*

(b) *Results and Benefits Expected;*

(c) *Approach;* and

(d) *Level of Effort.*

The specific information to be included under each of these headings is described in section C of part III, Evaluation Criteria.

The narrative should be typed double-spaced on a single-side of an 8½"×11" plain white paper, with 1" margins on all sides. All pages of the narrative (including charts, references/footnotes, tables, maps, exhibits, etc.) must be sequentially numbered, beginning with "Objectives and Need for the Project" as page number one. Applicants should not submit reproductions of larger size paper, reduced to meet the size requirement.

The length of the application, including the application forms and all attachments, should not exceed 60 pages. A page is a single side of an 8½"×11" sheet of paper. Applicants are requested not to send pamphlets, brochures or other printed material along with their application as these pose photocopy difficulties. These materials, if submitted, will not be included in the review process if they exceed the 60-page limit. Each page of the application will be counted to determine the total length.

5. *Organizational Capability Statement*

The Organizational Capability Statement should consist of a brief (two to three pages) background description of how the applicant organization (or the unit within the organization that will have responsibility for the project) is organized, the types and quantity of services it provides, and/or the research and management capabilities it possesses. This description should cover capabilities not included in the Program Narrative Statement. It may include descriptions of any current or previous relevant experience, or describe the competence of the project team and its demonstrated ability to produce a final product that is readily comprehensible and usable. An organization chart showing the relationship of the project to the current organization should be included.

6. *Part V—Assurances/Certifications*

Applicants are required to file an SF 424B, Assurances—Non-Construction Programs, and the Certification Regarding Lobbying. Both must be signed and returned with the application. In addition, applicants must certify their compliance with: (1) Drug-Free Workplace Requirements; and (2) Debarment and Other Responsibilities. These certifications are self-explanatory. Copies of these assurances/certifications are reprinted at the end of this announcement and should be reproduced, as necessary. A duly authorized representative of the applicant organization must certify that the applicant is in compliance with these assurances/certifications. A signature on the SF 424 indicates compliance with the Drug Free Workplace Requirements, and Debarment and Other Responsibilities certifications.

D. Checklist for a Complete Application

The checklist below is for your use to ensure that your application package has been properly prepared.

—One original, signed and dated application, plus two copies. Applications for different priority areas are packaged separately;

—Application is from an organization which is eligible under the eligibility requirements defined in the priority area description (screening requirement);

—Application length does not exceed 60 pages, unless otherwise specified in the priority area description.

—A complete application consists of the following items in this order:

—Application for Federal Assistance (SF 424, REV 4–88);

—A completed SPOC certification with the date of SPOC contact entered in line 16, page 1 of the SF 424 if applicable.
—Budget Information—Non-Construction Programs (SF 424A, REV 4–88);
—Budget justification for Section B—Budget Categories;
—Table of Contents;
—Letter from the Internal Revenue Service to prove non-profit status, if necessary;
—Copy of the applicant's approved indirect cost rate agreement, if appropriate;
—Project summary description and listing of key words;
—Program Narrative Statement (See Part III, Section C);
—Organizational capability statement, including an organization chart;
—Any appendices/attachments;
—Assurances—Non-Construction Programs (Standard Form 424B, REV 4–88);
—Certification Regarding Lobbying; and
—Certification of Protection of Human Subjects, if necessary.

E. The Application Package

Each application package must include an original and two copies of the complete application. Each copy should be stapled securely (front and back if necessary) in the upper left-hand corner. All pages of the narrative (including charts, tables, maps, exhibits, etc.) must be sequentially numbered, beginning with page one. In order to facilitate handling, please do not use covers, binders or tabs. Do not include extraneous materials as attachments, such as agency promotion brochures, slides, tapes, film clips, minutes of meetings, survey instruments or articles of incorporation.

Applicant should include a self-addressed, stamped acknowledgment card. All applicants will be notified automatically about the receipt of their application. If acknowledgment of receipt of your applicant is not received within eight weeks after the deadline date, please notify ACF by telephone at (202) 401–5529.

Dated: June 28, 1993.

Jacqueline G. Lemire,

Acting Director, Office of Community Services.

BILLING CODE 4184–01–M

OMB Approval No. 0348-0043

APPLICATION FOR FEDERAL ASSISTANCE

2. DATE SUBMITTED	Applicant Identifier
3. DATE RECEIVED BY STATE	State Application Identifier
4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

1. TYPE OF SUBMISSION:

Application	Preapplication
☐ Construction	☐ Construction
☐ Non-Construction	☐ Non-Construction

5. APPLICANT INFORMATION

Legal Name:	Organizational Unit:
Address (give city, county, state, and zip code):	Name and telephone number of the person to be contacted on matters involving this application (give area code)

6. EMPLOYER IDENTIFICATION NUMBER (EIN): ☐☐ — ☐☐☐☐☐☐☐

7. TYPE OF APPLICANT: (enter appropriate letter in box) ☐

A. State
B. County
C. Municipal
D. Township
E. Interstate
F. Intermunicipal
G. Special District
H. Independent School Dist.
I. State Controlled Institution of Higher Learning
J. Private University
K. Indian Tribe
L. Individual
M. Profit Organization
N. Other (Specify) _____

8. TYPE OF APPLICATION:

☐ New ☐ Continuation ☐ Revision

If Revision, enter appropriate letter(s) in box(es): ☐ ☐

A. Increase Award B. Decrease Award C. Increase Duration
D. Decrease Duration Other (specify):

_____

9. NAME OF FEDERAL AGENCY:

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: ☐☐ . ☐☐☐

TITLE:

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.):

13. PROPOSED PROJECT:

Start Date	Ending Date

14. CONGRESSIONAL DISTRICTS OF:

a. Applicant	b. Project

15. ESTIMATED FUNDING:

a. Federal	$ .00
b. Applicant	$ .00
c. State	$ .00
d. Local	$ .00
e. Other	$ .00
f. Program Income	$ .00
g. TOTAL	$ .00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:

DATE _____

b. NO. ☐ PROGRAM IS NOT COVERED BY E.O. 12372

☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

☐ Yes If "Yes," attach an explanation. ☐ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED

a. Typed Name of Authorized Representative	b. Title	c. Telephone number
d. Signature of Authorized Representative		e. Date Signed

Previous Editions Not Usable

Standard Form 424 (REV 4-88)
Prescribed by OMB Circular A-102

Authorized for Local Reproduction

BILLING CODE 4184-01-C

Instructions for the SF 424

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

Item and Entry:

1. Self-explanatory.

2. Date application submitted to Federal agency (or State if applicable) & applicant's control number (if applicable).

3. State use only (if applicable).

4. If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank.

5. Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application.

6. Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service.

7. Enter the appropriate letter in the space provided.

8. Check appropriate box and enter appropriate letter(s) in the space(s) provided.

—"New" means a new assistance award.

—"Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.

—"Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation.

9. Name of Federal agency from which assistance is being requested with this application.

10. Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested.

11. Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project.

12. List only the largest political entities affected (e.g., State, counties, cities).

13. Self-explanatory.

14. List the applicant's Congressional District and any District(s) affected by the program or project.

15. Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate *only* the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15.

16. Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process.

17. This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes.

18. To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.)

BILLING CODE 4184-01-M

OMB Approval No. 0348-0044

BUDGET INFORMATION — Non-Construction Programs

SECTION A – BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.		$	$	$	$	$
2.						
3.						
4.						
5. TOTALS		$	$	$	$	$

SECTION B – BUDGET CATEGORIES

6 Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	$	$	$	$	$
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a - 6h)					
j. Indirect Charges					
k. TOTALS (sum of 6i and 6j)	$	$	$	$	$
7. Program Income	$	$	$	$	$

Standard Form 424A (4-88)

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8.	$	$	$	$
9.				
10.				
11.				
12. TOTALS (sum of lines 8 and 11)	$	$	$	$

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$	$	$	$	$
14. NonFederal					
15. TOTAL (sum of lines 13 and 14)	$	$	$	$	$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16.	$	$	$	$
17.				
18.				
19.				
20. TOTALS (sum of lines 16 -19)	$	$	$	$

SECTION F - OTHER BUDGET INFORMATION

(Attach additional Sheets if Necessary)

21. Direct Charges:	22. Indirect Charges:

23. Remarks

SF 424A (4-88) Page 2
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Instructions for the SF-424A

General Instructions

This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the latter case, Sections A, B, C, and D should provide the budget for the first budget period (usually a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary

Lines 1–4, Columns (a) and (b).

For applications pertaining to a single Federal grant program (Federal Domestic Assistance Catalog number) and not requiring a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a single program requiring budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to multiple programs where none of the programs require a breakdown by function or activity, enter the catalog program title on each line in Column (a) and the respective catalog number on each line in Column (b).

For applications pertaining the multiple programs where one or more programs require a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1–4, Columns (c) through (g)

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should not equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

Section B. Budget Categories

In the column headings (1) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1–4, Column (a), Section A. When additional sheets are prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

Lines 6a-i—Show the totals Lines 6a to 6h in each column.

Line 6j—Show the amount of indirect cost.

Line 6k—Enter the total of amounts on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5.

Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the federal grantor agency in determining the total amount of the grant.

Section C. Non-Federal-Resources

Lines 8-11—Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet.

Column (a)—Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

Column (b)—Enter the contribution to be made by the applicant.

Column (c)—Enter the amount of the State's cash and in-kind contribution if the applicant is not a State or State agency. Applicants which are a State or State agencies should leave this column blank.

Column (d)—Enter the amount of cash and in-kind contributions to be made from all other sources.

Column (e)—Enter totals of Columns (b), (c), and (d).

Line 12—Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f), Section A.

Section D. Forecasted Cash Needs

Line 13—Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14—Enter the amount of cash from all other sources needed by quarter during the first year.

Line 15—Enter the totals of amounts on Lines 13 and 14.

Section E. Budget Estimates of Federal Funds Needed for Balance of the Project

Lines 16-19—Enter in Column (a) the same grant program titles shown in Column (a), Section A. A breakdown by function or activity is not necessary. For new applications and continuation grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods (usually in years). This section need not be completed for revisions (amendments, changes, or supplements) to funds for the current year of existing grants.

If more than four lines are needed to list the program titles, submit additional schedules as necessary.

Line 20—Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

Line 21—Use this space to explain amounts for individual direct object-class cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

Line 22—Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23—Provide any other explanations or comments deemed necessary.

Assurances—Non-Construction Programs

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§ 4728–4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88–352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681–1683, and 1685–1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101–6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92–255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91–616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd–3 and 290 ee–3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91–646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply with the provisions of the Hatch Act (5 U.S.C §§ 1501–1508 and 7324–7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§ 276a to 276a–7), the Copeland Act (40 U.S.C. § 276c and 18 U.S.C. §§ 874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327–333), regarding labor standards for federally assisted construction subagreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93–234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91–190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93–523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93–205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a–1 et seq.).

14. Will comply with P.L. 93–348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89–544, as amended, 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§ 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Signature of authorized certifying official

Applicant organization

Title

Date submitted

State Single Points of Contact

Arizona

Ms. Janice Dunn, Arizona State Clearinghouse, 3800 N. Central Avenue, Fourteenth Floor, Phoenix, Arizona 85012, Telephone: (602) 280–1315.

Arkansas

Mr. Joseph Gillesbie, Manager, State Clearinghouse, Office of Intergovernmental Service, Department of Finance and Administration, P.O. Box 3278, Little Rock, Arkansas 72203, Telephone (501) 371–1074.

California

Glenn Stober, Grants Coordinator, Office of Planning and Research, 1400 Tenth Street, Sacramento, California 95814, Telephone (916) 323–7480.

Colorado

State Single Point of Contact, State Clearinghouse, Division of Local Government, 1313 Sherman Street, Room 520, Denver, Colorado 80203, Telephone (303) 866–2156.

Connecticut

Under Secretary, Attn: Intergovernmental Review Coordinator, Comprehensive Planning Division, Office of Policy and Management, 80 Washington Street, Hartford, Connecticut 06106–4459, Telephone (203) 566–3410.

Delaware

Francine Booth, State Single Point of Contact, Executive Department, Thomas Collins Building, Dover, Delaware 19903, Telephone (302) 736–3326.

District of Columbia

Lovetta Davis, State Single Point of Contact, Executive Office of the Mayor, Office of Intergovernmental Relations, Room 416, District Building, 1350 Pennsylvania Avenue, N.W., Washington, D.C. 20004, Telephone (202) 727–9111.

Florida

Karen McFarland, Director, Florida State Clearinghouse, Executive Office of the Governor, Office of Planning and Budgeting, The Capitol, Tallahassee, Florida 32399–0001, Telephone: (904) 488–8114.

Georgia

Charles M. Badger, Administrator, Georgia State Clearinghouse, 270 Washington Street, S.W., Atlanta, Georgia 30334, Telephone (404) 656–3855.

Hawaii

Mr. Harold S. Masumoto, Acting Director, Office of State Planning, Department of

Planning and Economic Development, Office of the Governor, State Capitol—Room 406, Honolulu, Hawaii 96813, Telephone (808) 548–5893 FAX (808) 548–8172.

Illinois

Tom Berkshire, State Single Point of Contact, Office of the Governor, State of Illinois, Springfield, Illinois 62706, Telephone (217) 782–8639.

Indiana

Frank Sullivan, Budget Director, State Budget Agency, 212 State House, Indianapolis, Indiana 46204, Telephone (317) 232–5610.

Iowa

Steven R. McCann, Division for Community Progress, Iowa Department of Economic Development, 200 East Grand Avenue, Des Moines, Iowa 50309, Telephone (515) 281–3725.

Kentucky

Debbie Anglin, State Single Point of Contact, Kentucky State Clearinghouse, 2nd Floor Capital Plaza Tower, Frankfort, Kentucky 40601, Telephone (502) 564–2382.

Maine

State Single Point of Contact, Attn: Joyce Benson, State Planning Office, State House Station #38, Augusta, Maine 04333, Telephone (207) 289–3261.

Maryland

Mary Abrams, Chief, Maryland State Clearinghouse, Department of State Planning, 301 West Preston Street, Baltimore, Maryland 21201–2365, Telephone (301) 225–4490.

Massachusetts

State Single Point of Contact, Attn: Beverly Boyle, Executive Office of Communities & Development, 100 Cambridge Street, Room 1803, Boston, Massachusetts 02202, Telephone (617) 727–7001.

Michigan

Milton O. Waters, Director of Operations, Michigan Neighborhood Builders Alliance, Michigan Department of Commerce, Telephone (517) 373–7111.

Please direct correspondence to: Manager, Federal Project Review, Michigan Department of Commerce, Michigan Neighborhood Builders Alliance, P.O. Box 30242, Lansing, Michigan 48909, Telephone (517) 373–6223.

Mississippi

Cathy Mallette, Clearinghouse Officer, Department of Finance and Administration, Office of Policy Development, 421 West Pascagoula Street, Jackson, Mississippi 39203, Telephone (601) 960–4280.

Missouri

Lois Pohl, Federal Assistance Clearinghouse, Office of Administration, Division of General Services, P.O. Box 809, Room 430, Truman, Building, Jefferson City, Missouri 65102, Telephone (314) 751–4834.

Montana

Deborah Stanton, State Single Point of Contact, Intergovernmental Review Clearinghouse, c/o Office of Budget and Program Planning, Capitol Station, Room 202—State Capitol, Helena, Montana 59620, Telephone (406) 444–5522.

Nevada

Department of Administration, State Clearinghouse, Capitol Complex, Carson City, Nevada 89710, Attn: John B. Walker, Clearinghouse Coordinator.

New Hampshire

Jeffery H. Taylor, Director, New Hampshire Office of State Planning, Attn: Intergovernmental Review Process/James E. Bieber, 2½ Beacon Street, Concord, New Hampshire 03301, Telephone (603) 271–2155.

New Jersey

Barry Skokowski, Director, Division of Local Government Services, Department of Community Affairs, CN 803, Trenton, New Jersey 08625–0803, Telephone (609) 292–6613.

Please direct correspondence and questions to: Nelson S. Silver, State Review Process, Division of Local Government Services, CN 803, Trenton, New Jersey 08625–0803, Telephone (609) 292–9025.

New Mexico

Aurelia M. Sandoval, State Budget Division, DFA, Room 190, Bataan Memorial Building, Santa Fe, New Mexico 87503, Telephone (505) 827–3640, FAX (505) 827–3006.

New York

New York State Clearinghouse, Division of the Budget, State Capitol, Albany, New York 12224, Telephone (518) 474–1605.

North Carolina

Mrs. Chrys Baggett, Director, Intergovernmental Relations, N.C. Department of Administration, 116 W. Jones Street, Raleigh, North Carolina 27611, Telephone (919) 733–0499.

North Dakota

William Robinson, State Single Point of Contact, Office of Intergovernmental Affairs, Office of Management and Budget, 14th Floor, State Capitol, Bismarck, North Dakota 58505, Telephone (701) 224–2094.

Ohio

Larry Weaver, State Single Point of Contact, State/Federal Funds Coordinator, State Clearinghouse, Office of Budget and Management, 30 East Broad Street, 34th Floor, Columbus, Ohio 43266–0411, Telephone (614) 466–0698.

Rhode Island

Daniel W. Varin, Associate Director, Statewide Planning Program, Department of Administration, Division of Planning, 265 Melrose Street, Providence, Rhode Island 02907, Telephone (401) 277–2656.

Please direct correspondence and questions to: Review Coordinator, Office of Strategic Planning.

South Carolina

Danny L. Cromer, State Single Point of Contact, Grant Services, Office of the Governor, 1205 Pendleton Street, Room 477, Columbia, South Carolina 29201, Telephone (803) 734–0493.

South Dakota

Susan Comer, State Clearinghouse Coordinator, Office of the Governor, 500 East Capitol, Pierre, South Dakota 57501, Telephone (605) 773–3212.

Tennessee

Charles Brown, State Single Point of Contact, State Planning Office, 500 Charlotte Avenue, 309 John Sevier Building, Nashville, Tennessee 37219, Telephone (615) 741–1676.

Texas

Tom Adams, Governor's Office of Budget and Planning, P.O. Box 12428, Austin, Texas 78711, Telephone (512) 463–1778.

Utah

Utah State Clearinghouse, Office of Planning and Budget, ATTN: Carolyn Wright, Room 116 State Capitol, Salt Lake City, Utah 84114, Telephone (801) 538–1535.

Vermont

Bernard D. Johnson, Assistant Director, Office of Policy Research & Coordination, Pavilion Office Building, 109 State Street, Montpelier, Vermont 05602, Telephone (802) 828–3326.

West Virginia

Fred Cutlip, Director, Community Development Division, Governor's Office of Community and Industrial Development, Building #6, Room 553, Charleston, West Virginia 25305, Telephone (304) 348–4010.

Wisconsin

William C. Carey, Federal/State Relations, IGA Relations, 101 South Webster Street, P.O. Box 7864, Milwaukee, Wisconsin 53707, Telephone (608) 266–1741.

Please direct correspondence and questions to: William C. Carey, Section Chief, Federal/State Relations Office, Wisconsin Department of Administration, (608) 266–0267.

Wyoming

Ann Redman, State Single Point of Contact Wyoming State Clearinghouse, State Planning Coordinator's Office, Capitol Building, Cheyenne, Wyoming 82002, Telephone (307) 777–7574.

Territories

Guam

Michael J. Reidy,
Director,
Bureau of Budget and Management Research,
Office of the Governor,
P.O. Box 2950,
Agana, Guam 96910,
Telephone (617) 472–2285.

Northern Mariana Islands,

State Single Point of Contact,
Planning and Budget Office,
Office of the Governor,
Saipan, CM
Northern Mariana Islands 96950.

Puerto Rico

Patria Custodio/Israel Soto Marrero,
Chairman/Director,
Puerto Rico Planning Board,
Minillas Government Center,
P.O. Box 41119,
San Juan, Puerto Rico 00940–9985,
Telephone (809) 727–4444.

Virgin Islands

Jose L. George,
Director,
Office of Management and Budget,
No. 32 & 33 Kongens Gade,
Charlotte Amalie, V.I. 00802,
Telephone (809) 774–0750.

Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form—LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

State for Loan Guarantee and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form—LLL "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature

Title

Organization

Date

Certification Regarding Debarment, Suspension, and Other Responsibility Matters—Primary Covered Transactions

By signing and submitting this proposal, the applicant, defined as the primary participant in accordance with 45 CFR Part 76, certifies to the best of its knowledge and believe that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal Department or agency;

(b) Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a 3-year period preceding this application proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

The inability of a person to provide the certification required above will not necessarily result in denial of participation in this covered transaction. If necessary, the prospective participant shall submit an explanation of why it cannot provide the certification. The certification or explanation will be considered in connection with the Department of Health and Human Services (HHS) determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

The prospective primary participant agrees that by submitting this proposal, it will include the clause entitled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion—Lower Tier Covered Transaction," provided below without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions (To Be Supplied to Lower Tier Participants)

By signing and submitting this lower tier proposal, the prospective lower tier participant, as defined in 45 CFR Part 76, certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

(b) Where the prospective lower tier participant is unable to certify to any of the above, such prospective participant shall attach an explanation to this proposal.

The prospective lower tier participant further agrees by submitting this proposal that it will include this clause entitled "certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion—Lower Tier Covered Transactions. "without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

BILLING CODE 4184–01–M

U.S. Department of Health and Human Services
Certification Regarding Drug-Free Workplace Requirements
Grantees Other Than Individuals

By signing and/or submitting this application or grant agreement, the grantee is providing the certification set out below.

This certification is required by regulations implementing the Drug-Free Workplace Act of 1988, 45 CFR Part 76, Subpart F. The regulations, published in the May 25, 1990 Federal Register, require certification by grantees that they will maintain a drug-free workplace. The certification set out below is a material representation of fact upon which reliance will be placed when the Department of Health and Human Services (HHS) determines to award the grant. If it is later determined that the grantee knowingly rendered a false certification, or otherwise violates the requirements of the Drug-Free Workplace Act, HHS, in addition to any other remedies available to the Federal Government, may taken action authorized under the Drug-Free Workplace Act. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or governmentwide suspension or debarment.

Workplaces under grants, for grantees other than individuals, need not be identified on the certification. If known, they may be identified in the grant application. If the grantee does not identify the workplaces at the time of application, or upon award, if there is no application, the grantee must keep the identity of the workplace(s) on file in its office and make the information available for Federal inspection. Failure to identify all known workplaces constitutes a violation of the grantee's drug-free workplace requirements.

Workplace identifications must include the actual address of buildings (or parts of buildings) or other sites where work under the grant takes place. Categorical descriptions may be used (e.g., all vehicles of a mass transit authority or State highway department while in operation, State employees in each local unemployment office, performers in concert halls or radio studios.)

If the workplace identified to HHS changes during the performance of the grant, the grantee shall inform the agency of the change(s), if it previously identified the workplaces in question (see above).

Definitions of terms in the Nonprocurement Suspension and Debarment common rule and Drug-Free Workplace common rule apply to this certification. Grantees' attention is called, in particular, to the following definitions from these rules:

"Controlled substance" means a controlled substance in Schedules I through V of the Controlled Substances Act (21 USC 812) and as further defined by regulation (21 CFR 1308.11 through 1308.15).

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes;

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, use, or possession of any controlled substance;

"Employee" means the employee of a grantee directly engaged in the performance of work under a grant, including: (i) All "direct charge" employees; (ii) all "indirect charge" employees unless their impact or involvement is insignificant to the performance of the grant; and, (iii) temporary personnel and consultants who are directly engaged in the performance of work under the grant and who are on the grantee's payroll. This definition does not include workers not on the payroll of the grantee (e.g., volunteers, even if used to meet a matching requirement; consultants or independent contractors not on the grantee's payroll; or employees of subrecipients or subcontractors in covered workplaces).

The grantee certifies that it will or will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an ongoing drug-free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace; (2) The grantee's policy of maintaining a drug-free workplace; (3) Any available drug counseling, rehabilitation, and employee assistance programs; and, (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will:

(1) Abide by the terms of the statement; and, (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted:

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or, (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant (use attachments, if needed):

Place of Performance (Street address, City, County, State, ZIP Code)_____

Check ___ *if there are workplaces on file that are not identified here.*

Sections 76.630(c) and (d)(2) and 76.635(a)(1) and (b) provide that a Federal agency may designate a central receipt point for STATE-WIDE AND STATE AGENCY-WIDE certifications, and for notification of criminal drug convictions. For the Department of Health and Human Services, the central receipt point is: Division of Grants Management and Oversight, Office of Management and Acquisition, Department of Health and Human Services, Room 517-D, 200 Independence Avenue, S.W., Washington, D.C. 20201.

DGMO Form#2 Revised May 1990

[FR Doc. 93-15609 Filed 6-30-93; 8:45 am]
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federal register

Thursday
July 1, 1993

Part VI

Department of Education

34 CFR Part 378

Projects for Initiating Recreational Programs for Individuals With Disabilities; Rule and Notice Inviting Applications

DEPARTMENT OF EDUCATION

34 CFR Part 378

RIN 1820-AB23

Projects for Initiating Recreational Programs for Individuals With Disabilities

AGENCY: Department of Education.

ACTION: Final regulations.

SUMMARY: The Secretary amends the regulations implementing the Projects for Initiating Recreational Programs for Individuals with Disabilities program in order to implement changes made by the Rehabilitation Act Amendments of 1992. The amended regulations add new application requirements, provide for increasing matching requirements during the period of grant assistance, expand the types and purpose of activities that may be carried out, require that grantees advise applicants for and recipients of project services of the availability of assistance under the State Client Assistance Program, and add reporting requirements as a condition for continuation funding.

EFFECTIVE DATE: These regulations take effect either August 16, 1993 or later if Congress takes certain adjournments. If you want to know the effective date of these regulations, call or write the Department of Education contact person. A document announcing the effective date will be published in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: Thomas E. Finch, U.S. Department of Education, 400 Maryland Avenue, SW., room 3315, Switzer Building, Washington, DC 20202-2650. Telephone: (202) 205-9796. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

SUPPLEMENTARY INFORMATION: These final regulations implement changes in statutory provisions of the recreational discretionary grant program as authorized in title III, section 316 of the Rehabilitation Act of 1973 (Act), as amended by the Rehabilitation Act Amendments of 1992 (Pub. L. 102-569), enacted October 29, 1992.

The purpose of this program is to initiate programs to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration. To the maximum extent possible, these programs and activities are to be provided in settings with peers who are not individuals with disabilities.

This program supports the National Educational Goals. Specifically, the program addresses Goal 5, which calls for every adult American to be literate and to possess the skills necessary to compete in a global economy, by providing improved vocational rehabilitation opportunities for an increased number of people with disabilities.

On May 13, 1993 the Secretary published a notice of proposed rulemaking (NPRM) for this program in the **Federal Register** (58 FR 28448). The major issues related to this program are discussed in the preamble to the NPRM.

As a result of public comments, three changes have been made in the final regulations. First, the provision requiring services to be offered in settings with peers who are not individuals with disabilities, if possible and appropriate, has been strengthened to require that services be provided in integrated settings to the maximum extent possible. Second, the number of points assigned to the selection criterion "Impact of the project" has been increased while the number of points assigned to the selection criterion "Evaluation plan" has been reduced. Third, the use of the term "special" in the title of the program and throughout the regulations has been omitted.

Analysis of Comments and Changes

In response to the Secretary's invitation in the NPRM, eight parties submitted comments on the proposed regulations. An analysis of the comments and of the changes in the regulations since publication of the NPRM follows.

Substantive issues are discussed under the section of the regulations to which they pertain. Technical and other minor changes—and suggested changes the Secretary is not legally authorized to make under the applicable statutory authority—are not addressed. Comments relating to the grant renewal authority under this program will be considered in the development of separate proposed regulations to be published at a later date and are not dealt with in these final regulations.

Title of Program (Part 378)

Comments: One commenter recommended that the Department remove the word "Special" from the title of this program. The commenter expressed the view that this term, when applied to services for people with disabilities, carries with it the connotation that those services and activities are to be developed and delivered in a separate and segregated fashion, and thus conflicts with the basic intent of the Rehabilitation Act and the Americans with Disabilities Act (ADA).

Discussion: The Secretary agrees that the use of the term "Special" in this context is inappropriate and should be eliminated.

Changes: The term "Special" has been deleted from the title of this program and throughout 34 CFR part 378.

Settings With Peers (§ 378.1)

Comments: Two commenters suggested strengthening the provision requiring services to be offered in settings with peers who are not individuals with disabilities, if possible and appropriate. One commenter proposed that all projects be required to provide activities in integrated settings, i.e., provided in settings with individuals who are not disabled. The other commenter recommended that programs and activities be provided in integrated settings to the maximum extent possible.

Discussion: Section 316(a)(1) of the Act provides that recreational activities should be provided in settings with peers who are not individuals with disabilities whenever possible and appropriate. Thus, program regulations in § 378.1 cannot require without exception that all project activities be integrated. However, the Secretary agrees that language should be added to emphasize that all programs and activities should be carried out in a truly inclusive and integrated manner to the greatest extent possible.

Changes: Section 378.1 has been revised to include the phrase "to the maximum extent possible."

Who Is Eligible for an Award (§ 378.2)

Comments: One commenter recommended that this section be revised to indicate that organizations that provide vocational rehabilitation services to individuals with disabilities and organizations that provide recreational services to the general public are eligible to apply for these funds.

Discussion: Both types of organizations are eligible under this program as long as they are not profit-making. The statute limits grant eligibility to State and other public agencies and private nonprofit organizations.

Changes: None.

Employment Outcome

Comments: One commenter asked whether employment is an expected outcome under these projects.

Discussion: Employment is not an expected outcome under this program, but the recreational services provided are to enhance and facilitate skills leading to employment.

Changes: None.

Selection Criterion—Impact of the Project and Evaluation Plan (§§ 378.20 (a) and (e))

Comments: One commenter recommended that the points allocated to "Impact of the project" be increased and those allocated to "Evaluation plan" be decreased. Both are equally weighted in the NPRM.

Discussion: The Secretary agrees that the selection criterion on "Impact of the project" should be given greater weight.

Changes: The points allocated to "Impact of the project" have been increased from 15 points to 20 points and the points allocated to "Evaluation plan" have been lowered from 15 points to 10 points.

Selection Criteria—Plan of Operation (§ 378.20(b))

Comments: One commenter recommended that one of the eight components in the selection criterion entitled "Plan of operation" in § 378.20(b) be given more points to ensure that projects that take place in settings with peers who are not individuals with disabilities will be given greater weight.

Discussion: The proposed selection criterion entitled "Plan of operation" addresses various aspects of an applicant's project, including the extent to which individual project activities are provided in integrated settings. This selection criterion has been allocated a total of 25 points out of a possible 100 points. The eight component elements of this criterion are not individually weighted. The Secretary believes the number of points allocated for the criterion as a whole is appropriate and does not need to be increased.

Changes: None.

Selection Criterion—Quality of Key Personnel (§ 378.20(c))

Comments: A commenter requested that this section be revised to require the project director and other key staff to meet existing professional licensure or certification requirements.

Discussion: While the Secretary agrees that project personnel should be highly qualified, requiring all key staff to meet existing licensure or recognized professional certification standards would be very limiting and overly prescriptive. Moreover, the experience of the proposed project director, as well as other key personnel, will be reviewed by peer reviewers, and the adequacy of their experience and qualifications will be evaluated accordingly. The Secretary believes that it is up to the applicant to state the adequacy and relevance of the qualifications and experience of its key personnel.

Changes: None.

Individuals With Disabilities From Minority Backgrounds (§ 378.3(a)(4))

Comments: One commenter requested clarification of proposed § 378.3(a)(4), which requires each applicant in its application to describe the manner in which it will address the needs of individuals with disabilities from minority backgrounds. The commenter asked whether appropriate and documented outreach to encourage minority participation could constitute compliance, or whether actual provision of services to minority members is required.

Discussion: The requirements of this section could be met by the provision of outreach activities to encourage minority participation. Widespread and continuing outreach is now required. Each project must make substantial efforts to include minority members among the individuals it serves. The Secretary expects that in most instances this outreach will result in minority participation in the project.

Changes: None.

Type of Projects (§ 378.6)

Comments: A commenter suggested that this section be revised to include an express reference to public park and recreation agencies and that program support be limited to entities that are in the business of operating recreational programs.

Discussion: The Secretary agrees that recreational services providers are essential to this program. However, the Secretary can neither limit the eligible entities to recreational service providers only, nor limit the types of services provided to recreational services only. All public agencies and private nonprofit organizations are eligible to receive a grant under this program, whether or not their exclusive or primary activity is operating a recreational program.

Changes: None.

The ADA and Section 504 of the Act

Comments: One commenter expressed concern that these regulations make no mention of the applicability of regulations implementing section 504 of the Act or titles II and III of the ADA to grant recipients.

Discussion: In 34 CFR 75.500, which applies to this program, each grantee under a discretionary grant program is required to comply with the Department's section 504 regulations in 34 CFR part 104. The provisions of titles II and III of the ADA apply by their own terms.

Changes: None.

Miscellaneous Comments

Comments: A couple of commenters requested that additional information be included in the application package. One commenter requested more specific information about where program findings are to be disseminated. The same commenter also requested that the application package include information about the Client Assistance Program (CAP) and the availability of CAP materials.

Discussion: The Secretary believes that § 378.3(a)(1) is sufficiently clear as to whom the Secretary expects project findings to be disseminated. Also, each applicant is evaluated on its plan for dissemination in § 378.20(g) and can be given up to 10 points under this criterion. The Secretary does not believe it is beneficial to restrict or prescribe to the applicant to whom the findings should be disseminated.

The application package contains a general statement regarding the requirement to provide information on the CAP and further states that, if anyone is in need of additional information about a specific CAP, they can call the Education Department number that is provided.

Changes: None.

Comments: A commenter requested that a definition of "individual with a severe disability" be included in the application package.

Discussion: The appropriate definition of this term is included in technical changes to the general vocational rehabilitation services projects regulations in 34 CFR part 369, which is made applicable to this program in § 378.5.

Changes: None.

Comments: A commenter wanted clarification of whether in-kind contributions can be used to meet the program match requirement.

Discussion: In-kind contributions can be used to meet the program matching requirement. Section 378.4(a) makes applicable departmental grants regulations in 34 CFR parts 74 and 80. These regulations, which apply respectively to nonprofit organizations and State and local governments, expressly permit the value of in-kind

contributions to be used as match in §§ 74.52(b) and 80.24(a)(2).

Changes: None.

Executive Order 12291

These regulations have been reviewed in accordance with Executive Order 12291. They are not classified as major because they do not meet the criteria for major regulations established in the order.

Intergovernmental Review

This program is subject to the requirements of Executive Order 12372 and the regulations in 34 CFR part 79. The objective of the Executive order is to foster an intergovernmental partnership and a strengthened federalism by relying on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

In accordance with the order, this document is intended to provide early notification of the Department's specific plans and actions for this program.

List of Subjects in 34 CFR Part 378

Education, Grant programs—recreation, Recreation, Disability or individuals with disabilities, Reporting and recordkeeping requirements.

(Catalog of Federal Domestic Assistance Number 84.128J, Projects for Initiating Recreational Programs for Individuals with Disabilities.)

Richard W. Riley,

Secretary of Education.

The Secretary amends title 34 of the Code of Federal Regulations by revising part 378 to read as follows:

PART 378—PROJECTS FOR INITIATING RECREATIONAL PROGRAMS FOR INDIVIDUALS WITH DISABILITIES

Subpart A—General

Sec.

378.1 What is the Projects for Initiating Recreational Programs for Individuals with Disabilities program?
378.2 Who is eligible for an award?
378.3 What are the application requirements?
378.4 What regulations apply?
378.5 What definitions apply?
378.6 What types of projects may the Secretary fund?

Subpart B—How Does the Secretary Make an Award?

378.20 What selection criteria does the Secretary use?

Subpart C—What Conditions Must Be Met after an Award?

378.30 What is the duration of grants?
378.31 What are the matching requirements?
378.32 What are the additional requirements for grantees?

Authority: 29 U.S.C. 711(c) and 777(f), unless otherwise noted.

Subpart A—General

§ 378.1 What is the Projects for Initiating Recreational Programs for Individuals with Disabilities program?

This program is designed to initiate programs to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration. To the maximum extent possible, these programs and activities are to be provided in settings with peers who are not individuals with disabilities.

(Authority: Sec. 316 of the Act; 29 U.S.C. 711(c) and 777(f))

§ 378.2 Who is eligible for an award?

States and other public agencies and private nonprofit organizations are eligible to receive a grant under this program.

(Authority: Secs. 12(e) and 316 of the Act; 29 U.S.C. 711(c) and 777(f))

§ 378.3 What are the application requirements?

Each grant application must include—

(a) A description of—

(1) The manner in which the findings and results of the project will be disseminated to the interested public, especially to State and private rehabilitation agencies and organizations, to university-based leisure and recreation programs, to community recreation providers, and to related professional associations. The methods of dissemination may include, but are not limited to, videos, presentations, manuals, and newsletters;

(2) If applicable, the extent to which any service program for which the applicant has received funding previously under this part has been continued or will be continued after Federal funding ends;

(3) The means by which the service program proposed in the application will be continued after Federal funding ends; and

(4) The manner in which the applicant will address the needs of individuals with disabilities from minority backgrounds.

(b) An assurance that each project, to the greatest extent possible, will use existing resources and facilities to carry out the recreational activities provided by the project.

(Approved by the Office of Management and Budget under control number 1820–0018.)

(Authority: Secs. 21(b)(5) and 316(a)(4) of the Act; 29 U.S.C 718b and 777(f))

§ 378.4 What regulations apply?

The following regulations apply to the Projects for Initiating Recreational Programs for Individuals with Disabilities program:

(a) The Education Department General Administrative Regulations (EDGAR) as follows:

(1) 34 CFR part 74 (Administration of Grants to Institutions of Higher Education, Hospitals, and Nonprofit Organizations).

(2) 34 CFR part 75 (Direct Grant Programs).

(3) 34 CFR part 77 (Definitions that Apply to Department Regulations).

(4) 34 CFR part 79 (Intergovernmental Review of Department of Education Programs and Activities).

(5) 34 CFR part 80 (Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments).

(6) 34 CFR part 81 (General Education Provisions Act—Enforcement).

(7) 34 CFR part 82 (New Restrictions on Lobbying).

(8) 34 CFR part 85 (Governmentwide Debarment and Suspension (Nonprocurement) and Governmentwide Requirements for Drug-Free Workplace (Grants)).

(9) 34 CFR part 86 (Drug-Free Schools and Campuses).

(b) The regulations in this part 378.

(c) The regulations in 34 CFR part 369.

(Authority: Sec. 316 of the Act; 29 U.S.C. 777(f))

§ 378.5 What definitions apply?

The definitions in 34 CFR Part 369 apply to this program.

(Authority: Sec 12(c) of the Act; 29 U.S.C. 777(c))

§ 378.6 What types of projects may the Secretary fund?

(a) This program supports projects that initiate programs of recreational services and related experiences for individuals with disabilities.

(b) Activities carried out under this program may include, but are not limited to, arts, music, handicrafts, homemaking, camping, dance, 4–H activities, scouting, physical education and sports, vocational skills development, leisure education, leisure networking, leisure resource development, and related recreational activities designed—

(1) To aid in employment; and

(2) To maximize mobility, socialization, independence and community integration.

(Authority: Sec. 316 of the Act; 29 U.S.C. 777(f))

Subpart B—How Does the Secretary Make an Award?

§ 378.20 What selection criteria does the Secretary use?

(a) *Impact of the project* (20 points).

(1) The Secretary reviews each application to determine the extent to which the proposed project provides individuals with disabilities with recreational activities and related experiences that will enhance their employment, mobility, socialization, independence, and community integration skills.

(2) The Secretary looks for information that shows—

(i) The number of individuals with disabilities expected to be served;

(ii) The types of individuals with disabilities expected to be served;

(iii) The types of recreational activities expected to be available; and

(iv) How the proposed recreational activities and related experiences will improve the employment, mobility, socialization, independence, and community integration skills of the individuals with disabilities to be served.

(b) *Plan of operation* (25 points). The Secretary reviews each application to determine the quality of the plan of operation for the project, including—

(1) The quality of the design of the project;

(2) The extent to which the project includes specific intended outcomes that—

(i) Will accomplish the purposes of the program to initiate programs to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration;

(ii) Are attainable within the project period given the project's budget and other resources;

(iii) Are objective and measurable for purposes of evaluation; and

(iv) Include specific objectives to be met during each budget period that can be used to determine the progress of the project toward meeting its intended outcomes;

(3) The extent to which the plan of management is effective and ensures proper and efficient administration of the project;

(4) The quality of the applicant's plan to use its resources and personnel to achieve each objective and intended outcome during the period of Federal funding;

(5) The extent to which the applicant's plan identifies the numbers of eligible clients by type of disability and the numbers of clients with severe disabilities available to participate in the project;

(6) The extent to which the applicant plans to conduct outreach activities to recruit participants;

(7) The extent to which the applicant's plan ensures that individuals who are otherwise eligible to participate are selected without regard to race, color, national origin, gender, age, or disabling condition; and,

(8) The extent to which project activities are provided in settings with peers who are not individuals with disabilities.

(c) *Quality of key personnel* (10 points). The Secretary reviews each application to determine the quality of the key personnel proposed for the project, including—

(1) The relevant experience and training of the project director;

(2) The relevant experience and training of each of the other key personnel to be used on the project;

(3) The amount of time that each key person will commit to the project; and

(4) The extent to which the applicant, as part of its nondiscriminatory employment practices, encourages applications for employment from persons who are members of groups that have been traditionally underrepresented, such as—

(i) Persons with disabilities;

(ii) The elderly;

(iii) Women; and

(iv) Members of racial or ethnic minority groups.

(d) *Budget and cost effectiveness* (10 points). The Secretary reviews each application to determine whether—

(1) The budget for the project is adequate to support the project activities and the Federal matching requirements;

(2) Costs are reasonable in relation to the objectives of the project; and

(3) The application contains sufficient information on how the project will meet its matching requirement and increase its share of project costs during the project period, including an identification of the sources and amounts of matching funds.

(e) *Evaluation plan* (10 points). The Secretary reviews each application to determine the quality of the evaluation plan for the project, including the extent to which the applicant's methods of evaluation—

(1) Are appropriate for the project;

(2) Will determine how successful the project is in meeting its intended outcomes; and

(3) Are objective and produce data that are quantifiable.

(f) *Adequacy of resources* (5 points). The Secretary reviews each application for information to determine that the applicant plans to devote adequate resources to the project, including—

(1) The facilities that the applicant plans to use;

(2) The equipment and supplies that the applicant plans to use; and

(3) The recordkeeping capabilities of the applicant for financial and evaluation purposes.

(g) *Plan for dissemination of findings and results of the project* (10 points). The Secretary reviews each application to determine the quality of its plan to disseminate the findings and results of the project to the interested public to facilitate replication in other locations.

(h) *Plan for sustaining the program after the project period* (10 points). The Secretary reviews each application to determine the quality of its plan to sustain the project after the termination of Federal grant support.

(Approved by the Office of Management and Budget under control number 1820–0018.)

(Authority: Secs. 12(c), 306(h), and 316 of the Act; 29 U.S.C. 711(c) and 777(f))

Subpart C—What Conditions Must Be Met After an Award?

§ 378.30 What is the duration of grants?

Grants under this program shall be for a maximum period of three years unless renewed in accordance with the criteria in section 316(a)(2) of the Act.

(Authority: Secs. 12(c) and 316 of the Act; 29 U.S.C. 711(c) and 777(f))

§ 378.31 What are the matching requirements?

The Federal share of the costs of activities under this program is 100 percent for the first year of the grant, 75 percent for the second year, and 50 percent for the third year.

(Authority: Secs. 12(c) and 316 of the Act; 29 U.S.C. 711(c) and 777(f))

§ 378.32 What are the additional requirements for grantees?

(a) Recreational projects funded under this program must maintain, at a minimum, the same level of services over a three-year project period.

(b) Each grantee under this program shall prepare and submit annually to the Secretary a report on the results of its grant activities, including any other information the Secretary may require, as part of its application for continuation assistance.

(c) Each grantee shall advise applicants for and recipients of services under its project or, as appropriate, the parents, family members, guardians, advocates, or authorized representatives of these individuals, of the availability and purposes of the State Client Assistance Program, including information on seeking assistance from that program.

(Approved by the Office of Management and Budget under control number 1820–0018.)

(Authority: Secs. 12(c) and 316 of the Act; 29 U.S.C. 711(c) and 777(f))

[FR Doc. 93–15644 Filed 6–30–93; 8:45 am]

BILLING CODE 400–01–P

[CFDA No.: 84.128J]

Projects for Initiating Recreational Programs for Individuals With Disabilities; Inviting Applications for New Awards for Fiscal Year 1993

Purpose of Program: To initiate programs to provide individuals with disabilities with recreational activities and related experiences that can be expected to aid in their employment, mobility, socialization, independence, and community integration.

Eligible Applicants: States and other public agencies and private nonprofit agencies and organizations.

Deadline for Transmittal of Applications: August 2, 1993.

Deadline for Intergovernmental Review: October 1, 1993.

Applications Available: July 2, 1993.

Available Funds: $2,570,103.

Estimated Range of Awards: $85,000-$110,000.

Estimated Average Size of Awards: $92,000.

Estimated Number of Awards: 27.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 36 months.

Applicable Regulations: The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 75, 77, 79, 80, 81, 82, 85, and 86; and (b) The regulations for this program in 34 CFR part 378.

Selection Criteria: In evaluating applications for grants under this competition, the Secretary uses the selection criteria in 34 CFR 378.20.

For Applications: Telephone (202) 205–9343. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Tony Cavataio, U.S. Department of Education, 400 Maryland Avenue, SW., room 3318, Switzer Building, Washington, DC 20202–2740. Telephone: (202) 205–8206. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

Program Authority: 29 U.S.C. 711(c) and 777(f).

William L. Smith,

Acting Assistant Secretary Office of Special Education and Rehabilitative Services.

[FR Doc. 93–15643 Filed 6–30–93; 8:45 am]

BILLING CODE 4000–01–P

federal register

Thursday
July 1, 1993

Part VII

Federal Emergency Management Agency

44 CFR Part 354

Fees for Services to Support FEMA's Offsite Radiological Emergency Preparedness Program; Interim Rule

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 354

RIN 3067-AC10

Fee for Services to Support FEMA's Offsite Radiological Emergency Preparedness Program

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Interim rule and request for comments.

SUMMARY: This interim rule establishes the policy and administrative basis for FEMA to assess fees from licensees of commercial nuclear power plants. The purpose of this interim rule is to outline the policies and procedures for recovering the full amount of the costs incurred by FEMA to provide services for offsite planning and emergency preparedness for fiscal year (FY) 1993. Fees received under the interim rule are expected to offset Federal appropriations obligated for FEMA's Radiological Emergency Preparedness (REP) program. FEMA has requested a waiver from the U.S. Department of Treasury's cash management provisions of directive I TFM 6-8000, Section 8025.10 related to the 5-day time frame for billing for services rendered and the 30-day time frame for remission of payments by licensees.

DATES: This interim rule is effective July 1, 1993.

Comments from the public on this interim rule are encouraged and invited on or before August 16, 1993.

ADDRESSES: Written comments should be addressed to the Rules Docket Clerk, Office of the General Counsel, Federal Emergency Management Agency, room 840, 500 C Street, SW., Washington, DC 20472; (fax)(202) 646-4536.

FOR FURTHER INFORMATION CONTACT: Vern Wingert, Chief, Policy Development Branch, Radiological Preparedness Division, Office of Technological Hazards, Federal Emergency Management Agency, 500 C Street, SW., Washington, DC 20472, (tel.)(202) 646-2872.

SUPPLEMENTARY INFORMATION: This interim rule is published under the authority of Public Law 102-389, October 6, 1992, 106 stat. 1571-1619, which provides:

"The Director of the Federal Emergency Management Agency shall promulgate through rulemaking a schedule of fees applicable to persons subject to the Federal Emergency Management Agency's Radiological Emergency Preparedness regulations. The aggregate charges assessed pursuant to this section during fiscal year 1993 shall approximate, but not be less than, 100 per centum of the amounts anticipated by the Federal Emergency Management Agency to be obligated for its Radiological Emergency Preparedness program. * * * "[1]

On March 6, 1991, FEMA published in the **Federal Register** (56 FR 9452-9459) the final rule, 44 CFR part 353, that established a structure for assessing user fees to the Nuclear Regulatory Commission's (NRC) licensees for site-specific services provided by FEMA that directly contribute to the fulfillment of emergency preparedness requirements needed for licensing by the NRC under the Atomic Energy Act of 1954, as amended.

Under 44 CFR part 354, fees will be assessed based on costs incurred or obligated for both site-specific and generic services performed by FEMA staff and FEMA contractors. Licensees with multiple sites will receive consolidated bills.

A comparison of the fee structures under parts 353 and 354 follows with a highlighting of similarities and differences:

(1) Authority. The authority upon which part 353 was constituted and implemented is the Independent Offices Appropriations Act of 1952. This authority is not limited to any specific fiscal year. The authority for part 354 is Public Law 102-389 and is restricted to Fiscal Year (FY) 1993. While this interim rule is restricted by Public Law 102-389 to FY 1993, FEMA reserves the option of reissuing or amending part 354 for other fiscal years provided that appropriate authority is enacted.

(2) Scope. FEMA must assess NRC licensees for 100% of the FY 1993 costs of the REP Program under part 354. Under 44 CFR part 353, FEMA could only assess licensees for costs attributable to site-specific services that directly related to the fulfillment of NRC licensing requirements such as exercise evaluation. Based on the administration of part 353, fees assessed for such services were expected to recover approximately 40% to 60% of the annual REP Program budget.

(3) Assessment methodology. The method used for assessing fees under part 353 was based on time spent on applicable services multiplied by the established fiscal year hourly rate for FEMA personnel and on actual costs for applicable services provided by FEMA-contract personnel. Costs for generic services were not recovered. The method proposed under part 354 is based on recovery of both site-specific and generic costs incurred or obligated by FEMA personnel and by FEMA contractors.

(a) Site-specific services. While site-specific services billable under part 353 included only those services that directly related to NRC licensing requirements, site-specific services billable under part 354 include all such services whether or not they directly support NRC licensing requirements.

(b) Generic services. While licensees were not billed for the costs of generic services under part 353, they are under part 354.

While this interim rule is restricted by Public Law 102-389 to fiscal year (FY) 1993, FEMA reserves the option of reissuing or amending part 354 for other fiscal years provided that appropriate authority is enacted. The Administration has proposed in the FY 1994 budget to continue collecting fees for FY 1994 and subsequent fiscal years.

While FEMA is employing a new approach for the assessment and collection of fees from licensees for FY 1993, part 353 remains in effect and will apply in any subsequent fiscal year for which FEMA is not authorized to collect user fees for generic services.

Services provided by FEMA in support of preparedness for commercial nuclear power plant emergencies are provided in support of a Memorandum of Understanding (MOU) between NRC and FEMA (50 FR 15485, April 18, 1985) and regulations issued by both FEMA (44 CFR parts 350, 351 and 352) and NRC (10 CFR parts 50 and 52). The referenced NRC-FEMA MOU is included as Appendix A to part 354.

Emergency response plans and exercises are evaluated under joint FEMA-NRC criteria, NUREG-0654/FEMA-REP-1, Revision 1 and Supplement 1. When State and local governments do not participate in the development of an emergency plan, the licensee can submit a utility plan to the NRC. FEMA, as requested by the NRC through the MOU, also will make assessments and provide findings on utility-developed plans and exercises, evaluated under Supplement 1.

Under § 354.4, Assessment of Fees, of the interim rule, the determination of costs is divided into three groups: FEMA Personnel; FEMA Contract Personnel; and Other FEMA Contract Services. FEMA estimates that the hourly rate for FEMA Personnel will be in the range of $110 to $130, based on salaries and expenses of an estimated $5,872,000, including travel, divided by the actual number of site-specific hours reported for FY 1993. FEMA will

[1] See § 354.3 for definition of "Persons or Licensee."

recover an estimated $4,300,000 for its Contract Personnel in FY 1993, and an estimated $300,000 for Other Contract Services.

The annual billing provision and the 45-day time frame for payment of FEMA's bills are incorporated in this interim rule contingent upon the granting of a waiver from the U.S. Department of Treasury. If the Department of the Treasury does not grant a waiver, FEMA, if practicable, will execute an estimated billing procedure, and will modify this interim rule accordingly.

Regulatory Flexibility Act

The Director certifies that this interim rule will not have a significant economic impact on a substantial number of small entities in accordance with the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., because the rule will not apply to a substantial number of small entities as defined by the Small Business Size Standards, 13 CFR 121.601, Division E, Major Group 49, as amended 57 FR 62520, December 31, 1992, and is not expected (1) to have significant secondary or incidental effects on a substantial number of small entities, nor (2) to create any additional burden on a substantial number of small entities.

National Environmental Policy Act

The Director has determined under the National Environmental Policy Act of 1969 and FEMA Regulation, 44 CFR part 10, Environmental Considerations, that this rule is not a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required.

Regulatory Analysis

This interim rule is not a "major rule" as the term is used in Executive Order 12291 and implementing OMB guidance. It will not have an annual effect on the economy of $100 million or more, will not result in a major increase in costs or prices to consumers, individual industries, Federal, State or local agencies or geographic regions and will not have a significant adverse impact on competition, employment, investment, productivity, innovation or the ability of United States based enterprises to compete with foreign based enterprises in domestic or export markets. Therefore, no regulatory analysis is required.

Paperwork Reduction Act

This rule does not contain collection of information requirements and is not subject to the Paperwork Reduction Act of 1980, as amended (44 U.S.C. 3501 et seq.).

Executive Order 12612, Federalism

A Federalism assessment under E.O. 12612 has been prepared and a copy is available for inspection and copying for a fee from the Rules Docket Clerk, above.

List of Subjects in 44 CFR Part 354

Disaster assistance, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, and Technical assistance.

Accordingly, 44 CFR is amended by adding part 354 to read as follows:

PART 354—FEE FOR SERVICES TO SUPPORT THE RADIOLOGICAL EMERGENCY PREPAREDNESS PROGRAM

Sec.

354.1 Purpose.
354.2 Scope.
354.3 Definitions.
354.4 Assessment of fees
354.5 Costs for FEMA and FEMA-contract services.
354.6 Description of site-specific and generic services.
354.7 Billing and payment of fees.
354.8 Failure to pay.

Appendix A to Part 354—Memorandum of Understanding Between Federal Emergency Management Agency and Nuclear Regulatory Commission

Authority: Sec. 109, Pub. L. 96–295, 94 Stat. 780; Sec. 2901, Pub. L. 98–369, 98 Stat. 494; Title III, Pub. L. 102–389, 106 Stat. 1571; EO 12148, 3 CFR, 1979 Comp., p. 412 (50 U.S.C. App. 2251 note); EO 12657, 3 CFR, 1988 Comp., p. 611.

§ 354.1 Purpose.

This part sets out policies and procedures for assessment of fees to licensees of commercial nuclear power plants for recovery of at least 100% of the cost of services provided by the Federal Emergency Management Agency (FEMA) through the Radiological Emergency Preparedness (REP) Program, as authorized under title III, Public Law 102–389, 106 stat. 1571. The schedule of fees shall be fair and equitable, and shall reflect the full amount of direct and indirect costs incurred through the provision of regulatory services. Such fees will be assessed in a manner that reflects the use of agency resources for classes of regulated persons and the administrative costs of collecting such fees. Fees received pursuant to this section shall be deposited in the general fund of the Treasury as offsetting receipts. Assessment and collection of such fees are only authorized during fiscal year 1993.

§ 354.2 Scope.

The regulation in this part applies to all licensees who have applied for or have received:

(a) A license from the Nuclear Regulatory Commission (NRC) to construct, operate or decommission a commercial nuclear power plant;

(b) A possession-only license;

(c) An early site permit;

(d) A combined construction permit and operating license; or

(e) Any other NRC licensee that is now or may become subject to requirements for offsite radiological planning and preparedness.

§ 354.3 Definitions.

As used in this part, the following terms and concepts are defined:

(a) *FEMA* means the Federal Emergency Management Agency.

(b) *NRC* means the Nuclear Regulatory Commission.

(c) *Technical assistance* means services provided by FEMA to facilitate offsite radiological emergency planning and preparedness such as provision of support for the preparation of offsite radiological emergency response plans and procedures, provision of advice and recommendations for specific aspects of preparedness such as alert and notification and emergency public information.

(d) *Persons or Licensee* means the utility or organization that has applied for or has received:

(1) A license from the NRC to operate or decommission a commercial nuclear power plant;

(2) A possession-only license;

(3) An early site permit;

(4) A combined construction permit and operating license; or

(5) Any other NRC licensee that is now or may become subject to requirements for offsite radiological planning and preparedness activities.

(e) *RAC* means Regional Assistance Committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Energy, Department of Agriculture, Department of Transportation, Department of Commerce, Department of Interior, and other Federal Departments and agencies as appropriate.

(f) REP means Radiological Emergency Preparedness as in FEMA's REP Program.

(g) *Fiscal Year* means the Federal fiscal year commencing on the first day of October through the thirtieth day of September.

(h) *Federal Radiological Preparedness Coordinating Committee (FRPCC)* means

a committee chaired by FEMA with representatives from the Nuclear Regulatory Commission, Environmental Protection Agency, Department of Health and Human Services, Department of Interior, Department of Energy, Department of Transportation, United States Department of Agriculture, Department of Commerce, Department of State, Department of Veterans Affairs, General Services Administration, National Communications System, the National Aeronautics and Space Administration and other Federal Departments and agencies as appropriate.

(i) *Site* means the location at which one or more commercial nuclear power plants (reactor units) have been, or are planned to be, constructed.

(j) *Site-specific costs* mean the costs of all offsite radiological emergency planning and preparedness services provided by FEMA and by FEMA contractors concerning the broad geographical area surrounding the locations at which one or more commercial nuclear power plants (reactor units) have been, or are planned to be, constructed.

(k) *Obligate or obligation* refers to a legal reservation of appropriated funds for expenditure.

§ 354.4 Assessment of fees.

Assessments of fees for licensees shall be based on the following methodology that includes both site-specific and generic activities provided by FEMA and through its contractors. Fees will be assessed only for services provided by FEMA and by FEMA contractors and not for the services provided by other Federal agencies involved in the FRPCC or the RACs.

(a) *Determination of costs for FEMA personnel.* The costs for FEMA personnel will be determined by multiplying the number of site-specific hours reported by the FY 1993 hourly rate. The hourly rate will be calculated by dividing the total obligations for salaries and expenses, including travel, by the actual number of site-specific hours reported for FY 1993. Because total obligations for salaries and expenses will serve as the fixed base in this methodology, the generic costs associated with FEMA staff services will be recovered as a proportional part of the site-specific costs. The exact hourly rate will be calculated at the end of FY 1993 when the total number of site-specific hours can be determined.

(b) *Determination of costs for FEMA contract personnel.* The following approach will be used to recover the bulk of the Emergency Management Planning and Assistance (EMPA), contractor support, portion of the REP Program budget. This portion of EMPA funds is used for contractors who perform predominantly site-specific services. Actual site-specific costs obligated will be assessed to the licensees. Obligated generic costs will be assessed proportional to the percentage of the site-specific costs.

(c) *Determination of costs for other FEMA contract services.* The following approach will be used to recover the remaining EMPA funds of the REP Program budget. Obligations solely for generic program work that provides similar potential benefits to all licensees will be divided equally among the licensees on a per site basis.

§ 354.5 Costs for FEMA and FEMA-contract services.

Licensees shall be assessed for site-specific services provided by FEMA personnel based on an established hourly rate. FEMA contract services will be charged either on the basis of actual costs incurred or equally among all licensees as described in § 354.4.

§ 354.6 Description of site-specific and generic services.

Site-specific and generic services provided by FEMA and by FEMA contractors for which licensees shall be assessed fees include but are not limited to the following:

(a) *Site-specific services.* (1) Evaluation of State and local plans and preparedness.

(2) Scheduling of exercises.

(3) Development of exercise objectives and scenarios.

(4) Pre-exercise logistics.

(5) Conduct of exercise and evaluation.

(6) Preparing, reviewing and finalizing exercise reports, notice and conduct of public meetings.

(7) Scheduling, conducting and evaluating remedial exercises, medical services drills, or other exercises and drills including participation in meetings and the preparation and review of reports.

(8) Preparation of findings and determinations on the adequacy or approval of plans and preparedness.

(9) Conduct of the formal 44 CFR part 350 review process.

(10) Providing technical assistance to States and local governments.

(11) Review of licensee submissions under 44 CFR Part 352.

(12) Review of NRC licensee plan submissions under the NRC-FEMA Memorandum of Understanding on Planning and Preparedness in appendix A of this part.

(13) Participation in NRC adjudicatory proceedings and any other site-specific legal costs.

(14) Alert and notification system reviews.

(15) Responses to petitions filed under 10 CFR 2.206.

(16) Disaster-initiated reviews and evaluations.

(17) Congressionally initiated reviews and evaluations.

(18) Licensee requests for audits of the fee program or responses to challenges for FEMA's administration of the fee program.

(b) *Generic services.* (1) Development of guidance, planning standards and policy.

(2) Coordination with other Federal agencies to enhance the preparedness of State and local governments for radiological emergencies.

(3) Coordination of REP Program issues with constituent organizations such as the National Emergency Management Association, Conference of Radiation Control Program Directors, Nuclear Management and Resources Council, and the Edison Electric Institute.

(4) Implementation and coordination of REP Program training with FEMA's Emergency Management Institute (EMI), to assure effective development and implementation of REP training courses and conferences.

(5) Participation of REP staff as lecturers or other functions at EMI, conferences and workshops.

(6) Services associated with the assessment of fees, billing, and administration of this part.

§ 354.7 Billing and payment of fees.

FEMA will forward bills to licensees based on the assessment methodology set forth in § 354.4 to recover at least 100% of the cost of services provided by FEMA through its REP Program. The assessments for each site and licensee, as stated above, will reflect both site-specific and generic costs for FEMA staff and contractors. Because of the need to use actual site-specific data in this methodology, FEMA will determine costs for FY 1993 services during the first quarter of FY 1994 and forward one bill to licensees for assessed FY 1993 costs. FEMA bills will be payable by each licensee within 45 days of receipt of invoices. Notwithstanding the above, FEMA reserves the right to assess licensees on an estimated basis at any time during the fiscal year.

§ 354.8 Failure to pay.

In any case where FEMA believes that a licensee has failed to pay a prescribed fee required under this part, procedures

will be implemented in accordance with 44 CFR part 11, subpart C, to effectuate collections under the Debt Collection Act of 1982 (31 U.S.C. 3711 et seq.).

Appendix A to Part 354—Memorandum of Understanding Between Federal Emergency Management Agency and Nuclear Regulatory Commission

The Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) have entered into a new Memorandum of Understanding (MOU) Relating To Radiological Emergency Planning and Preparedness. This supersedes a memorandum entered into on November 1, 1980 (published December 16, 1980, 45 FR 82713). The substantive changes in the new MOU deal principally with the FEMA handling of NRC requests for findings and determinations concerning offsite planning and preparedness. The basis and conditions for interim findings in support of licensing are defined, as well as provisions for status reports when plans are not complete. The text of the MOU follows.

Memorandum of Understanding Between NRC and FEMA Relating to Radiological Emergency Planning and Preparedness

I. Background and Purposes

This Memorandum of Understanding (MOU) establishes a framework of cooperation between the Federal Emergency Management Agency (FEMA) and the U.S. Nuclear Regulatory Commission (NRC) in radiological emergency response planning matters, so that their mutual efforts will be directed toward more effective plans and related preparedness measures at and in the vicinity of nuclear reactors and fuel cycle facilities which are subject to 10 CFR part 50, appendix E, and certain other fuel cycle and materials licensees which have potential for significant accidental offsite radiological releases. The memorandum is responsive to the President's decision of December 7, 1979, that FEMA will take the lead in offsite planning and response, his request that NRC assist FEMA in carrying out this role, and the NRC's continuing statutory responsibility for the radiological health and safety of the public.

On January 14, 1980, the two agencies entered into a "Memorandum of Understanding Between NRC and FEMA to Accomplish a Prompt Improvement in Radiological Emergency Preparedness," that was responsive to the President's December 7, 1979, statement. A revised and updated memorandum of understanding became effective November 1, 1980. This MOU is a further revision to reflect the evolving relationship between NRC and FEMA and the experience gained in carrying out the provisions of the January and November 1980 MOU's. This MOU supersedes these two earlier versions of the MOU.

The general principles, agreed to in the previous MOU's and reaffirmed in this MOU, are as follows: FEMA coordinates all Federal planning for the offsite impact of radiological emergency response plans[1] and preparedness, makes findings and determinations as to the adequacy and capability of implementing offsite plans and communicates those findings and determinations to the NRC. The NRC reviews those FEMA findings and determinations in conjunction with the NRC onsite findings for the purpose of making determinations on the overall state of emergency preparedness. These overall findings and determinations are used by NRC to make radiological health and safety decisions in the issuance of licenses and the continued operation of licensed plants to include taking enforcement actions as notices of violations, civil penalties, orders, or shutdown of operating reactors. This delineation of responsibilities avoids duplicative efforts by the NRC staff in offsite preparedness matters.

A separate MOU dated October 22, 1980, deals with NRC/FEMA cooperation and responsibilities in response to an actual or potential radiological emergency. Operations Response Procedures have been developed that implement the provisions of the Incident Response MOU. These documents are intended to be consistent with the Federal Radiological Emergency Response Plan which describes the relationships, roles, and responsibilities of Federal agencies for responding to accidents involving peacetime nuclear emergencies.

II. Authorities and Responsibilities

FEMA-Executive Order 12148 charges the Director, FEMA, with the responsibility to establish Federal policies for, and coordinate, all civil defense and civil emergency planning, management, mitigation, and assistance functions of Executive agencies (Section 2–101) and represent the President in working with State and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response, and recovery programs. (Section 2–104.)

On December 7, 1979, the President in response to the recommendations of the Kemeny Commission on the Accident at Three Mile Island, directed that FEMA assume lead responsibility for all offsite nuclear emergency planning and response.

Specifically, the FEMA responsibilities with respect to radiological emergency preparedness as they relate to NRC are:

1. To take the lead in offsite emergency planning and to review and assess offsite emergency plans and preparedness for adequacy.

2. To make findings and determinations as to whether offsite emergency plans are adequate and can be implemented (e.g., adequacy and maintenance of procedures, training, resources staffing levels and qualifications, and equipment adequacy). Notwithstanding the procedures which are set forth in 44 CFR part 350 for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency planning and preparedness around particular sites, referred to as interim findings, will be provided by FEMA for use as needed in the NRC licensing process. Such findings will be provided by FEMA on mutually agreed to schedules or on specific NRC request. The request and findings will normally be by written communications between the co-chairs of the NRC/FEMA Steering Committee. An interim finding provided under this arrangement will be an extension of FEMA's procedures for review and approval of offsite radiological emergency plans and preparedness set forth in 44 CFR part 350. It will be based on the review of currently available plans and, if appropriate, joint exercise results related to a specific nuclear power plant site.

An interim finding based only on the review of currently available offsite plans will include an assessment as to whether these plans are adequate when measured against the standards and criteria of NUREG–0654/FEMA–REP–1, and, pending a demonstration through an exercise, whether there is reasonable assurance that the plans can be implemented. The finding will indicate one of the following conditions: (1) Plans are adequate and there is reasonable assurance that they can be implemented with only limited or no corrections needed; (2) plans are adequate, but before a determination can be made as to whether they can be implemented, corrections must be made to the plans or supporting measures must be demonstrated (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment adequacy); or (3) plans are not adequate and cannot be implemented until they are revised to correct deficiencies noted in the Federal review.

If in FEMA's view the plans that are available are not completed or are not ready for review, FEMA will provide NRC with a status report delineating milestones for preparation of the plan by the offsite authorities as well as FEMA's actions to assist in timely development and review of the plans.

An interim finding on preparedness will be based on review of currently available plans and joint exercise results and will include an assessment as to (1) whether offsite emergency plans are adequate as measured against the standards and criteria of NUREG–0654/FEMA–REP–1, Revision 1 and Supplement 1, and (2) whether the exercise(s) demonstrated that there is reasonable assurance that the plans can be implemented.

An interim finding on preparedness will indicate one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in an exercise; (2) there are deficiencies that may adversely affect public health and safety that must be corrected in order to provide reasonable assurance that the plans can be implemented; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision.

3. To assume responsibility, as a supplement to State and local, and utility efforts, for radiological emergency preparedness training of State and local officials.

4. To develop and issue an updated series of interagency assignments which delineate

[1] Assessments of offsite plans may be based on State and local government plans submitted to FEMA under its rule (44 CFR Part 350), and as noted in 44 CFR 350.3(f) may also be based on plans currently available to FEMA or furnished to FEMA through the NRC/FEMA Steering Committee.

respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response. [Current assignments are in 44 CFR part 351, March 11, 1982 (47 FR 10758).]

NRC—The Atomic Energy Act of 1954, as amended, requires that the NRC grant licenses only if the health and safety of the public is adequately protected. While the Atomic Energy Act does not specifically require emergency plans and related preparedness measures, the NRC requires consideration of overall emergency preparedness as a part of the licensing process. The NRC rules (10 CFR 50.33, 50.34, 50.47, 50.54, and appendix E to 10 CFR part 50) include requirements for the licensee's emergency plans.

Specifically, the NRC responsibilities for radiological emergency preparedness are:

1. To assess licensee emergency plans for adequacy. This review will include organizations with whom licensees have written agreements to provide onsite support services under emergency conditions.

2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment).

3. To review the FEMA findings and determinations as to whether offsite plans are adequate and can be implemented.

4. To make radiological health and safety decisions with regard to the overall state of emergency preparedness (i.e., integration of emergency preparedness onsite as determined by the NRC and offsite as determined by FEMA and reviewed by NRC) such as assurance for continued operation, for issuance of operating licenses, or for taking enforcement actions, such as notices of violations, civil penalties, orders, or shutdown of operating reactors.

III. Areas of Cooperation

A. NRC Licensing Reviews. FEMA will provide support to the NRC for licensing reviews related to reactors, fuel facilities, and materials licensees with regard to the assessment of the adequacy of offsite radiological emergency response plans and preparedness. This will include timely submittal of an evaluation suitable for inclusion in NRC safety evaluation reports.

Substantially prior to the time that a FEMA evaluation is required with regard to fuel facility or materials license review, NRC will identify those fuel and materials licensees with potential for significant accidental offsite radiological releases and transmit a request for review to FEMA as the emergency plans are completed.

FEMA routine support will include providing assessments, findings and determinations (interim and final) on offsite plans and preparedness related to reactor license reviews. To support its findings and determinations, FEMA will make expert witnesses available before the Commission, the NRC Advisory Committee on Reactor Safeguards, NRC hearings boards and administrative law judges, for any court actions, and during any related discovery proceedings.

FEMA will appear in NRC licensing proceedings as part of the presentation of the NRC staff. FEMA counsel will normally present FEMA witnesses and be permitted, at the discretion of the NRC licensing board, to cross-examine the witnesses of parties, other than the NRC witnesses, on matters involving FEMA findings and determinations, policies, or operations; however, FEMA will not be asked to testify on status reports. FEMA is not a party to NRC proceedings and, therefore, is not subject to formal discovery requirements placed upon parties to NRC proceedings. Consistent with available resources, however, FEMA will respond informally to discovery requests by parties. Specific assignment of professional responsibilities between NRC and FEMA counsel will be primarily the responsibility of the attorneys assigned to a particular case. In situations where questions of professional responsibility cannot be resolved by the attorneys assigned, resolution of any differences will be made by the General Counsel of FEMA and the Executive Legal Director of the NRC or their designees. NRC will request the presiding Board to place FEMA on the service list for all litigation in which it is expected to participate.

Nothing in this MOU shall be construed in any way to diminish NRC's responsibility for protecting the radiological health and safety of the public.

B. FEMA review of offsite plans and preparedness. NRC will assist in the development and review of offsite plans and preparedness through its membership on the Regional Assistance Committees (RAC). FEMA will chair the Regional Assistance Committees. Consistent with NRC's statutory responsibility, NRC will recognize FEMA as the interface with State and local governments for interpreting offsite radiological emergency planning and preparedness criteria as they affect those governments and for reporting to those governments the results of any evaluation of their radiological emergency plans and preparedness.

Where questions arise concerning the interpretation of the criteria, such questions will continue to be referred to FEMA Headquarters, and when appropriate, to the NRC/FEMA Steering Committee to assure uniform interpretation.

C. Preparation for and evaluation of joint exercises. FEMA and NRC will cooperate in determining exercise requirements for licensees, and State and local governments. They will also jointly observe and evaluate exercises. NRC and FEMA will institute procedures to enhance the review of objectives and scenarios for joint exercises. This review is to assure that both the onsite considerations of NRC and the offsite considerations of FEMA are adequately addressed and integrated in a manner that will provide for a technically sound exercise upon which an assessment of preparedness capabilities can be based. The NRC/FEMA procedures will provide for the availability of exercise objectives and scenarios sufficiently in advance of scheduled exercises to allow enough time for adequate review by NRC and FEMA and correction of any deficiencies by the licensee. The failure of a licensee to develop a scenario that adequately addresses both onsite and offsite considerations may result in NRC taking enforcement actions.

The FEMA reports will be a part of an interim finding on emergency preparedness; or will be the result of an exercise conducted pursuant to FEMA's review and approval procedures under 44 CFR part 350. Exercise evaluations will identify one of the following conditions: (1) There is reasonable assurance that the plans are adequate and can be implemented as demonstrated in the exercise; (2) there are deficiencies that may adversely impact public health and safety that must be corrected by the affected State and local governments in order to provide reasonable assurance that the plan can be implemented; or (3) FEMA is undecided and will provide a schedule of actions leading to a decision. Within 30 days of the exercise, a draft exercise report will be sent to the State, with a copy to the Regional Assistance Committee, requesting comments and a schedule of corrective actions, as appropriate, from the State in 30 days. When there are deficiencies of the types noted in 2 above, and when there is a potential for a remedial exercise, FEMA Headquarters will promptly discuss these with NRC Headquarters. Within 90 days of the exercise, the FEMA report will be forwarded to the NRC Headquarters. Within 15 days of receipt of the FEMA report, NRC will notify FEMA in writing of action taken with the licensee relative to FEMA initiatives with State and local governments to correct deficiencies identified in the exercise.

D. Emergency planning and preparedness guidance. NRC has lead responsibility for the development of emergency planning and preparedness guidance for licensees. FEMA has lead responsibility for the development of radiological emergency planning and preparedness guidance for State and local agencies. NRC and FEMA recognize the need for an integrated, coordinated approach to radiological emergency planning and preparedness by NRC licensees and State and local governments. NRC and FEMA will each, therefore, provide opportunity for the other agency to review and comment on such guidance (including interpretations of agreed joint guidance) prior to adoption as formal agency guidance.

E. Support for document management system. FEMA and NRC will each provide the other with continued access to those automatic data processing support systems which contain relevant emergency preparedness data.

At NRC this includes Document Management System support to the extent that it does not affect duplication or records retention. At FEMA, this includes technical support to the Radiological Emergency Preparedness Management Information System. This agreement is not intended to include the automated information retrieval support for the national level emergency response facilities.

F. Ongoing NRC research and development programs. Ongoing NRC and FEMA research and development programs that are related to State and local radiological emergency planning and preparedness will be coordinated. NRC and FEMA will each

provide opportunity for the other agency to review and comment on relevant research and development programs prior to implementing them.

G. Public information and education programs. FEMA will take the lead in developing public information and educational programs. NRC will assist FEMA by reviewing for accuracy educational materials concerning radiation, and its hazards and information regarding appropriate actions to be taken by the general public in the event of an accident involving radioactive materials.

IV. NRC/FEMA Steering Committee

The NRC/FEMA Steering Committee on Emergency Preparedness will continue to be the focal point for coordination of emergency planning, preparedness, and response activities between the two agencies. The Steering Committee will consist of an equal number of members to represent each agency with one vote per agency. When the Steering Committee cannot agree on the resolution of an issue, the issue will be referred to NRC and FEMA management. The NRC members will have lead responsibility for licensee planning and preparedness and the FEMA members will have lead responsibility for offsite planning and preparedness. The Steering Committee will assure coordination of plans and preparedness evaluation activities and revise, as necessary, acceptance criteria for licensee, State and local radiological emergency planning and preparedness. NRC and FEMA will then consider and adopt criteria as appropriate in their respective jurisdictions.

V. Working Arrangements

A. The normal point of contact for implementation of the points in this MOU will be the NRC/FEMA Steering Committee.

B. The Steering Committee will establish the day-to-day procedures for assuring that the arrangements of this MOU are carried out.

VI. Memorandum of Understanding

A. This MOU shall be effective as of date of signature and shall continue in effect unless terminated by either party upon 30 days notice in writing.

B. Amendments or modifications to this MOU may be made upon written agreement by both parties.

Approved for the U.S. Nuclear Regulatory Commission.

Dated: April 3, 1985.

William J. Dircks,

Executive Director for Operations.

Approved for the Federal Emergency Management Agency.

Dated: April 3, 1985.

Samuel W. Speck,

Associate Director, State and Local Programs and Support.

Dated: June 28, 1993.

James L. Witt,

Director.

[FR Doc. 93–15687 Filed 6–30–93; 8:45 am]

BILLING CODE 6718–20–P

federal register

Thursday
July 1, 1993

Part VIII

Department of the Treasury

Fiscal Service

Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies; Notice

4810-35
4-00236

DEPARTMENT OF THE TREASURY

FISCAL SERVICE

(Dept. Circular 570; 1993 Revision)

COMPANIES HOLDING CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETIES ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANIES

Effective July 1, 1993

This Circular is published annually, as of July 1, solely for the information of Federal bond-approving officers and persons required to give bonds to the United States. Copies of the Circular, interim changes and other information pertinent to Federal sureties may be obtained from the Surety Bond Branch, Financial Management Service, Department of the Treasury, Washington, DC 20227, telephone (FTS/202) 874-6850. Interim changes are published in the FEDERAL REGISTER as they occur. For the most current list of Treasury authorized companies, dial into our Public Bulletin Board system at (FTS/202) 874-7214.

The following companies have complied with the law and the regulations of the Department of the Treasury and are acceptable as sureties and reinsurers on Federal bonds under Title 31 of the United States Code, Sections 9304 to 9308 [See Note (a)].

Diane E. Clark
Assistant Commissioner, Financial Information
Financial Management Service

IMPORTANT INFORMATION IS CONTAINED IN THE NOTES AT THE END OF THIS CIRCULAR. PLEASE READ THE NOTES CAREFULLY.

Acceptance Insurance Company. BUSINESS ADDRESS: 222 South 15th Street, Suite 600 North, Omaha, NE 68102. PHONE: (404) 344-8800. UNDERWRITING LIMITATION b/: $3,332,000. SURETY LICENSES c/: AZ, AR, CO, IL, IA, KY, MI, NE, ND, OH, TN, VA. INCORPORATED IN: NEBRASKA.

ACCREDITED SURETY AND CASUALTY COMPANY, INC. BUSINESS ADDRESS: P.O. Box 568529, Orlando, FL 32856-8529. PHONE: (407) 841-8500. UNDERWRITING LIMITATION b/: $575,000. SURETY LICENSES c/: AL, FL, GA, IN, LA, MD, MS, VA. INCORPORATED IN: Florida.

ACSTAR INSURANCE COMPANY. BUSINESS ADDRESS: 233 Main Street, P.O. Box 2350, New Britain, CT 06050-2350. PHONE: (312) 902-5616. UNDERWRITING LIMITATION b/: $1,559,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Aetna Casualty & Surety Company of America. BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $16,117,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Aetna Casualty and Surety Company (The). BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $119,119,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Aetna Casualty and Surety Company of Illinois. BUSINESS ADDRESS: 1020 31st Street, Downers Grove, IL 60515. PHONE: (708) 971-4700. UNDERWRITING LIMITATION b/: $25,377,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

See Footnotes/Notes at end of Circular

Aetna Casualty Company of Connecticut. BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $4,655,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NM, NY, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Aetna Commercial Insurance Company. BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $4,723,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NM, NC, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Aetna Life and Casualty Company. BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $375,167,000. SURETY LICENSES c/: CT, DC, PA. INCORPORATED IN: Connecticut.

Affiliated FM Insurance Company. BUSINESS ADDRESS: P.O. Box 7500, Johnston, RI 02919. PHONE: (401) 275-3000. UNDERWRITING LIMITATION b/: $4,097,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Rhode Island.

Alaska Pacific Assurance Company. BUSINESS ADDRESS: 1601 Chestnut Street, P.O. Box 7716, Philadelphia, PA 19192. PHONE: (907) 263-0200. UNDERWRITING LIMITATION b/: $2,687,000. SURETY LICENSES c/: AK, AZ, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NJ, NM, NY, OH, OR, PA, RI, SC, SD, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Alaska.

Allegheny Mutual Casualty Company. BUSINESS ADDRESS: P.O. Box 1116, Meadville, PA 16335-7116. PHONE: (814) 336-2521. UNDERWRITING LIMITATION b/: $707,000. SURETY LICENSES c/: DC, FL, IL, IN, LA, MD, MI, NJ, OH, OK, PA, TN, TX, WI. INCORPORATED IN: Pennsylvania.

See Footnotes/Notes at end of Circular

Allendale Mutual Insurance Company. BUSINESS ADDRESS: Post Office Box 7500, Johnston, RI 02919. PHONE: (401) 275-3000. UNDERWRITING LIMITATION b/: $66,979,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Rhode Island.

Alliance Assurance Company of America. BUSINESS ADDRESS: 10 East 50th Street, 27th Floor, New York, NY 10022. PHONE: (212) 753-8130. UNDERWRITING LIMITATION b/: $9,995,000. SURETY LICENSES c/: IN, KY, ME. INCORPORATED IN: New York.

Allied Mutual Insurance Company. BUSINESS ADDRESS: 701 5th Avenue, Des Moines, IA 50391-2007. PHONE: (515) 280-4211. UNDERWRITING LIMITATION b/: $14,532,000. SURETY LICENSES c/: AZ, AR, CA, CO, DC, ID, IL, IN, IA, KS, KY, MI, MN, MO, MT, NE, NV, NM, ND, OH, OK, OR, SD, TN, TX, UT, WA, WI, WY. INCORPORATED IN: Iowa.

Allstate Insurance Company. BUSINESS ADDRESS: Allstate Plaza, Northbrook, IL 60062. PHONE: (708) 402-5000. UNDERWRITING LIMITATION b/: $302,263,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

AMCO Insurance Company. BUSINESS ADDRESS: 701 5th Avenue, Des Moines, IA 50391-2007. PHONE: (515) 280-4211. UNDERWRITING LIMITATION b/: $8,479,000. SURETY LICENSES c/: AZ, CA, CO, ID, IL, IN, IA, KS, KY, MI, MN, MO, MT, NE, NM, ND, OH, OR, SD, TN, TX, UT, WI, WY. INCORPORATED IN: Iowa.

American Automobile Insurance Company. BUSINESS ADDRESS: 777 San Marin Drive, Novato, CA 94998. PHONE: (415) 899-2000. UNDERWRITING LIMITATION b/: $7,291,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

See Footnotes/Notes at end of Circular

AMERICAN BANKERS INSURANCE COMPANY OF FLORIDA. BUSINESS ADDRESS: 11222 Quail Roost Dr., Miami, FL 33157. PHONE: (305) 253-2244. UNDERWRITING LIMITATION b/: $4,879,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Florida.

American Bonding Company. BUSINESS ADDRESS: 6245 E. Broadway, SUITE: 600, Tucson, AZ 85711. PHONE: (602) 747-5555. UNDERWRITING LIMITATION b/: $1,615,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, DE, DC, FL, GA, GU, HI, ID, IN, IA, KS, KY, LA, MD, MN, MS, MO, MT, NE, NV, NM, OH, OK, OR, PA, SD, TN, TX, UT, VA, WA, WV. INCORPORATED IN: Arizona.

American Casualty Company of Reading, Pennsylvania. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $22,860,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

American Economy Insurance Company. BUSINESS ADDRESS: 500 North Meridian Street, Indianapolis, IN 46204-1275. PHONE: (317) 262-6262. UNDERWRITING LIMITATION b/: $38,795,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

American Employers' Insurance Company. BUSINESS ADDRESS: One Beacon Street, Boston, MA 02108. PHONE: (617) 725-6000. UNDERWRITING LIMITATION b/: $14,352,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

American Fidelity Company. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (603) 645-7000. UNDERWRITING LIMITATION b/: $1,562,000. SURETY LICENSES c/: AK, CT, DC, IA, ME, MD, MA, MS, NE, NH, ND, OK, RI, SD, UT, VT, WV. INCORPORATED IN: Vermont.

See Footnotes/Notes at end of Circular

American Fire and Casualty Company. BUSINESS ADDRESS: 136 North Third Street, Hamilton, OH 45025. PHONE: (513) 867-3000. UNDERWRITING LIMITATION b/: $11,469,000. SURETY LICENSES c/: AL, AR, CO, DC, FL, GA, KS, KY, LA, MD, MS, NC, SC, TN, TX, VA. INCORPORATED IN: Ohio.

American Guarantee and Liability Insurance Company. BUSINESS ADDRESS: 1400 American Lane, Schaumburg, IL 60196. PHONE: (708) 605-6000. UNDERWRITING LIMITATION b/: $20,333,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: New York.

American Home Assurance Company. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (212) 770-7000. UNDERWRITING LIMITATION b/: $121,618,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

American Insurance Company (The). BUSINESS ADDRESS: 777 San Marin Drive, Novato, CA 94998. PHONE: (415) 889-2000. UNDERWRITING LIMITATION b/: $32,954,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Nebraska.

American Manufacturers Mutual Insurance Company. BUSINESS ADDRESS: 1 Kemper Drive, Long Grove, IL 60049-0001. PHONE: (708) 540-2000. UNDERWRITING LIMITATION b/: $14,308,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

American Motorists Insurance Company. BUSINESS ADDRESS: 1 Kemper Drive, Long Grove, IL 60049-0001. PHONE: (708) 540-2000. UNDERWRITING LIMITATION b/: $21,814,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Illinois.

See Footnotes/Notes at end of Circular

American National Fire Insurance Company. BUSINESS ADDRESS: 580 Walnut Street, Cincinnati, OH 45202. PHONE: (513) 369-5000. UNDERWRITING LIMITATION b/: $1,935,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

American Re-Insurance Company. BUSINESS ADDRESS: 555 College Road East, P.O. Box 5241, Princeton, NJ 08543. PHONE: (609) 243-4200. UNDERWRITING LIMITATION b/: $87,577,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Delaware.

American Resources Insurance Co., Inc.. BUSINESS ADDRESS: P.O. Box 91149, Mobile, AL 36691. PHONE: (205) 639-0985. UNDERWRITING LIMITATION b/: $474,000. SURETY LICENSES c/: DC, IN, KY, TN. INCORPORATED IN: Alabama.

AMERICAN ROAD INSURANCE COMPANY (THE). BUSINESS ADDRESS: The American Road, Dearborn, MI 48121-6027. PHONE: (800) 234-2722. UNDERWRITING LIMITATION b/: $34,274,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Michigan.

American States Insurance Company. BUSINESS ADDRESS: 500 North Meridian Street, Indianapolis, IN 46204-1275. PHONE: (317) 262-6262. UNDERWRITING LIMITATION b/: $103,816,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

American Surety and Casualty Company. BUSINESS ADDRESS: P. O. Box 24827, Jacksonville, FL 32241-4827. PHONE: (904) 733-6661. UNDERWRITING LIMITATION b/: $589,000. SURETY LICENSES c/: AL, DC, FL, GA. INCORPORATED IN: Florida.

American Surety Company. BUSINESS ADDRESS: 7470 N. Figueroa Street, Los Angeles, CA 90041-1717. PHONE: (213) 254-4010. UNDERWRITING LIMITATION b/: $288,000. SURETY LICENSES c/: CA. INCORPORATED IN: California.

See Footnotes/Notes at end of Circular

Amwest Surety Insurance Company. BUSINESS ADDRESS: P.O. Box 4500, Woodland Hills, CA 91367. PHONE: (818) 704-1111. UNDERWRITING LIMITATION b/: $2,704,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

Antilles Insurance Company. BUSINESS ADDRESS: Post Office Box 3507, Old San Juan, PR 00902. PHONE: (809) 721-4900. UNDERWRITING LIMITATION b/: $1,552,000. SURETY LICENSES c/: PR. INCORPORATED IN: Puerto Rico.

Argonaut Insurance Company. BUSINESS ADDRESS: 250 Middlefield Road, Menlo Park, CA 94025-3507. PHONE: (415) 326-0900. UNDERWRITING LIMITATION b/: $40,079,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

Arkwright Mutual Insurance Company. BUSINESS ADDRESS: 225 Wyman Street, P.O. Box 9198, Waltham, MA 02254-9198. PHONE: (617) 890-9300. UNDERWRITING LIMITATION b/: $57,850,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

Associated Indemnity Corporation. BUSINESS ADDRESS: 777 San Marin Drive, Novato, CA 94998. PHONE: (415) 899-2000. UNDERWRITING LIMITATION b/: $3,331,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

ATLANTIC ALLIANCE FIDELITY AND SURETY COMPANY. BUSINESS ADDRESS: P.O. Box 985, Cherry Hill, NJ 08003. PHONE: (609) 795-5575. UNDERWRITING LIMITATION b/: $204,000. SURETY LICENSES c/: DE, MD, NJ, PA. INCORPORATED IN: New Jersey.

See Footnotes/Notes at end of Circular

Atlantic Mutual Insurance Company. BUSINESS ADDRESS: 45 Wall Street, New York, NY 10005. PHONE: (212) 943-1800. UNDERWRITING LIMITATION b/: $27,987,000. SURETY LICENSES c/: AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New York.

Auto-Owners Insurance Company. BUSINESS ADDRESS: Post Office Box 30660, Lansing, MI 48909. PHONE: (517) 323-1200. UNDERWRITING LIMITATION b/: $88,560,000. SURETY LICENSES c/: AL, AZ, FL, GA, IL, IN, IA, KS, MI, MN, MO, NE, NC, ND, OH, SC, SD, TN, TX, VA, WI. INCORPORATED IN: Michigan.

Automobile Insurance Company of Hartford, Connecticut (The). BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $28,095,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, CT, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

BANKERS INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 15707, St. Petersburg, FL 33733. PHONE: (813) 579-4000. UNDERWRITING LIMITATION b/: $691,000. SURETY LICENSES c/: AL, AZ, AR, FL, GA, IL, IA, KY, LA, MS, MO, NV, NM, OH, PA, SC, TN, TX. INCORPORATED IN: FLORIDA.

BITUMINOUS CASUALTY CORPORATION. BUSINESS ADDRESS: 320 - 18th Street, Rock Island, IL 61201. PHONE: (309) 786-5401. UNDERWRITING LIMITATION b/: $8,125,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

BOND SAFEGUARD INSURANCE COMPANY. BUSINESS ADDRESS: 246 E. Janata Blvd., Lombard, IL 60148. PHONE: (708) 495-9380. UNDERWRITING LIMITATION b/: $344,000. SURETY LICENSES c/: IL, IN, KS, MO, OK, TN, TX. INCORPORATED IN: Illinois.

See Footnotes/Notes at end of Circular

Boston Old Colony Insurance Company. BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $2,783,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY INCORPORATED IN: Massachusetts.

Buckeye Union Insurance Company (The). BUSINESS ADDRESS: P.O. Box 1499, Columbus, OH 43216. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $36,926,000. SURETY LICENSES c/: AK, DC, FL, IL, IN, IA, KS, KY, MD, MI, MO, NY, OH, PA, RI, SD, VA, WV. INCORPORATED IN: Ohio.

Capitol Indemnity Corporation. BUSINESS ADDRESS: P.O. Box 5900, Madison, WI 53705-0900. PHONE: (608) 231-4450. UNDERWRITING LIMITATION b/: $3,585,000. SURETY LICENSES c/: AZ, AR, CO, DE, FL, ID, IL, IN, IA, KS, KY, LA, MI, MN, MO, MT, NE, NV, NM, ND, OH, OK, OR, PA, SD, TX, UT, WA, WI, WY. INCORPORATED IN: Wisconsin.

Centennial Insurance Company. BUSINESS ADDRESS: 45 Wall Street, New York, NY 10005. PHONE: (212) 943-1800. UNDERWRITING LIMITATION b/: $11,800,000. SURETY LICENSES c/: AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New York.

Century Indemnity Company. BUSINESS ADDRESS: 1601 Chestnut St., P.O. Box 7716, Philadelphia, PA 19192. PHONE: (215) 761-1000. UNDERWRITING LIMITATION b/: $1,459,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

CENTURY SURETY COMPANY. BUSINESS ADDRESS: P.O. Box 2689, Columbus, OH 43216-2689. PHONE: (614) 785-9000. UNDERWRITING LIMITATION b/: $831,000. SURETY LICENSES c/: AZ, IN, OH, WV, WI. INCORPORATED IN: OHIO.

See Footnotes/Notes at end of Circular

Charter Oak Fire Insurance Company (The). BUSINESS ADDRESS: One Tower Square, Hartford, CT 06183-6014. PHONE: (203) 277-0111. UNDERWRITING LIMITATION b/: $10,263,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

CHRYSLER INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 5168, Southfield, MI 48086-5168. PHONE: (313) 948-3390. UNDERWRITING LIMITATION b/: $7,071,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Michigan.

CIGNA Insurance Company of Illinois. BUSINESS ADDRESS: 8755 West Higgins Rd., Chicago, IL 60631. PHONE: (312) 380-8100. UNDERWRITING LIMITATION b/: $3,280,000. SURETY LICENSES c/: IL. INCORPORATED IN: Illinois.

CIGNA Insurance Company of Texas. BUSINESS ADDRESS: 600 East Las Colinas Blvd., SUITE: 620, Irving, TX 75039. PHONE: (214) 869-8500. UNDERWRITING LIMITATION b/: $2,799,000. SURETY LICENSES c/: NM, TX. INCORPORATED IN: Texas.

CIGNA Insurance Company of the Midwest. BUSINESS ADDRESS: 9200 Keystone Crossing, P.O. Box 80443, Indianapolis, IN 46280. PHONE: (317) 573-3000. UNDERWRITING LIMITATION b/: $3,008,000. SURETY LICENSES c/: IN. INCORPORATED IN: INDIANA.

CIGNA Reinsurance Company. BUSINESS ADDRESS: Two Liberty Place, 1601 Chestnut St, Philadelphia, PA 19192. PHONE: (215) 761-3535. UNDERWRITING LIMITATION b/: $2,353,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, GA, HI, ID, IL, IN, KY, LA, ME, MN, MS, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, SD, TN, TX, UT, VA, WA, WI. INCORPORATED IN: Delaware.

Cincinnati Casualty Company (The). BUSINESS ADDRESS: P.O. Box 145496, Cincinnati, OH 45250-5496. PHONE: (513) 870-2000. UNDERWRITING LIMITATION b/: $4,955,000. SURETY LICENSES c/: AL, AZ, CO, FL, GA, IL, IN, IA, KS, KY, MI, MS, MO, NE, NM, NC, OH, OK, PA, SC, SD, TN, TX, UT, VT, VA, WV, WI, WY. INCORPORATED IN: Ohio.

See Footnotes/Notes at end of Circular

Cincinnati Insurance Company (The). BUSINESS ADDRESS: Post Office Box 145496, Cincinnati, OH 45250-5496. PHONE: (513) 870-2000. UNDERWRITING LIMITATION b/: $87,191,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

COLONIAL AMERICAN CASUALTY AND SURETY COMPANY. BUSINESS ADDRESS: 210 North Charles Street, Baltimore, MD 21201. PHONE: (301) 539-0800. UNDERWRITING LIMITATION b/: $554,000. SURETY LICENSES c/: DC, IA, KS, MD, MO, TX, VA. INCORPORATED IN: Maryland.

COLONIAL SURETY COMPANY. BUSINESS ADDRESS: 50 Chestnut Ridge Road, Montvale, NJ 07645. PHONE: (201) 573-8788. UNDERWRITING LIMITATION b/: $185,000. SURETY LICENSES c/: DE, DC, MD, MA, NJ, PA. INCORPORATED IN: Pennsylvania.

Commercial Insurance Company of Newark, New Jersey. BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $6,877,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Jersey.

Commercial Union Insurance Company. BUSINESS ADDRESS: One Beacon Street, Boston, MA 02108. PHONE: (617) 725-6000. UNDERWRITING LIMITATION b/: $33,733,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

CONNECTICUT INDEMNITY COMPANY (THE). BUSINESS ADDRESS: P.O. Box 420, Hartford, CT 06141. PHONE: (203) 674-6600. UNDERWRITING LIMITATION b/: $1,945,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: CONNECTICUT.

Consolidated Surety Insurance Company, Inc. BUSINESS ADDRESS: 9841 Airport Blvd., SUITE: 916, Los Angeles, CA 90045. PHONE: (310) 649-0990. UNDERWRITING LIMITATION b/: $290,000. SURETY LICENSES c/: NM. INCORPORATED IN: New Mexico.

See Footnotes/Notes at end of Circular

Continental Casualty Company. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $211,720,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Continental Insurance Company (The). BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $33,318,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY INCORPORATED IN: New Hampshire.

CONTINENTAL INSURANCE COMPANY OF PUERTO RICO (THE). BUSINESS ADDRESS: P.O. Box 431, San Patricio Plaza, PMC, San Juan, PR 00968. PHONE: (809) 793-6111. UNDERWRITING LIMITATION b/: $13,102,000. SURETY LICENSES c/: PR, VI. INCORPORATED IN: Puerto Rico.

Continental Reinsurance Corporation. BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (215) 761-3535. UNDERWRITING LIMITATION b/: $19,254,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, DC, FL, HI, ID, IL, IN, IA, LA, MI, MS, MT, NV, NJ, NM, NY, NC, ND, OH, OK, OR, PR, TX, UT, VA, WA, WY. INCORPORATED IN: California.

Continental Western Insurance Company. BUSINESS ADDRESS: P.O. Box 1594, Des Moines, IA 50306. PHONE: (515) 278-3000. UNDERWRITING LIMITATION b/: $6,399,000. SURETY LICENSES c/: AZ, AR, CO, ID, IL, IN, IA, KS, KY, ME, MI, MN, MO, MT, NE, NV, NM, ND, OH, OK, SD, UT, WI, WY. INCORPORATED IN: Iowa.

CONTRACTORS BONDING AND INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 9271, Seattle, WA 98109-0271. PHONE: (206) 622-7053. UNDERWRITING LIMITATION b/: $1,593,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Washington.

Cooperativa de Seguros Multiples de Puerto Rico. BUSINESS ADDRESS: G.P.O. Box 363846, San Juan, PR 00936-3846. PHONE: (809) 758-8585. UNDERWRITING LIMITATION b/: $8,172,000. SURETY LICENSES c/: PR. INCORPORATED IN: Puerto Rico.

See Footnotes/Notes at end of Circular

CUMBERLAND CASUALTY & SURETY COMPANY. BUSINESS ADDRESS: 4311 West Waters Avenue, SUITE: 501, Tampa, FL 33614. PHONE: (813) 885-2112. UNDERWRITING LIMITATION b/: $451,000. SURETY LICENSES c/: DE, DC, FL, GU, ID, IN, LA, MD, MT, NV, ND, SC, SD, TX, WY. INCORPORATED IN: Texas.

Cumberland Surety Insurance Company, Inc.. BUSINESS ADDRESS: 367 West Short Street, Lexington, KY 40507. PHONE: (800) 767-8622. UNDERWRITING LIMITATION b/: $523,000. SURETY LICENSES c/: IN, KY. INCORPORATED IN: Kentucky.

CUMIS INSURANCE SOCIETY, INC. BUSINESS ADDRESS: Post Office Box 1084, Madison, WI 53701. PHONE: (608) 238-5851. UNDERWRITING LIMITATION b/: $13,666,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Wisconsin.

DAIRYLAND INSURANCE COMPANY. BUSINESS ADDRESS: 1800 North Point Drive, Stevens Point, WI 54481. PHONE: (715) 346-6000. UNDERWRITING LIMITATION b/: $17,355,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DE, FL, GA, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NM, NY, NC, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Wisconsin.

DELTA CASUALTY COMPANY. BUSINESS ADDRESS: 4711 North Clark Street, Chicago, IL 60640. PHONE: (312) 878-8500. UNDERWRITING LIMITATION b/: $600,000. SURETY LICENSES c/: IL, IA. INCORPORATED IN: Illinois.

DEVELOPERS INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 19725, Irvine, CA 92713. PHONE: (714) 263-3300. UNDERWRITING LIMITATION b/: $611,000. SURETY LICENSES c/: AZ, CA, NV, OR, WA. INCORPORATED IN: California.

Empire Fire and Marine Insurance Company. BUSINESS ADDRESS: 1624 Douglas Street, Omaha, NE 68102. PHONE: (402) 341-0135. UNDERWRITING LIMITATION b/: $8,347,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, FL, GA, HI, ID, IL, IN, IA, KS, KY, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OR, PA, SC, SD, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Nebraska.

See Footnotes/Notes at end of Circular

EMPLOYERS' FIRE INSURANCE COMPANY (THE). BUSINESS ADDRESS: One Beacon Street, Boston, MA 02108. PHONE: (617) 725-6000. UNDERWRITING LIMITATION b/: $5,348,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

EMPLOYERS INSURANCE OF WAUSAU A Mutual Company. BUSINESS ADDRESS: P.O. Box 8017, Wausau, WI 54402-8017. PHONE: (715) 845-5211. UNDERWRITING LIMITATION b/: $15,000,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Wisconsin.

Employers Mutual Casualty Company. BUSINESS ADDRESS: Post Office Box 712, Des Moines, IA 50303-0712. PHONE: (515) 280-2511. UNDERWRITING LIMITATION b/: $23,503,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Iowa.

Employers Reinsurance Corporation. BUSINESS ADDRESS: 5200 Metcalf, P.O. Box 2991, Overland Park, KS 66201. PHONE: (913) 676-5200. UNDERWRITING LIMITATION b/: $127,481,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

Erie Insurance Company. BUSINESS ADDRESS: 100 Erie Insurance Place, Erie, PA 16530. PHONE: (814) 870-2000. UNDERWRITING LIMITATION b/: $3,676,000. SURETY LICENSES c/: DC, IN, KY, MD, NC, OH, PA, TN, VA, WV. INCORPORATED IN: Pennsylvania.

EXPLORER INSURANCE COMPANY (THE). BUSINESS ADDRESS: P.O. Box 85563, San Diego, CA 92186-5563. PHONE: (619) 546-2400. UNDERWRITING LIMITATION b/: $1,751,000. SURETY LICENSES c/: AZ, CA, ID, IA, MT, NV, NM, OR. INCORPORATED IN: Arizona.

See Footnotes/Notes at end of Circular

FAR WEST INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 4500, Woodland Hills, CA 91365-4500. PHONE: (818) 704-1111. UNDERWRITING LIMITATION b/: $407,000. SURETY LICENSES c/: AK, AZ, CA, CO, DC, ID, IN, MT, NV, OR, SD, UT, WY. INCORPORATED IN: California.

Farmers Alliance Mutual Insurance Company. BUSINESS ADDRESS: 1122 North Main Street, McPherson, KS 67460. PHONE: (316) 241-2200. UNDERWRITING LIMITATION b/: $5,331,000. SURETY LICENSES c/: AZ, CO, ID, IN, IA, KS, MN, MO, MT, NE, NM, ND, OK, SD, TX, WY. INCORPORATED IN: Kansas.

Farmington Casualty Company. BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $16,173,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Farmland Mutual Insurance Company. BUSINESS ADDRESS: 1963 Bell Avenue, Des Moines, IA 50315. PHONE: (515) 245-8800. UNDERWRITING LIMITATION b/: $5,563,000. SURETY LICENSES c/: AR, CO, ID, IL, IN, IA, KS, KY, MI, MN, MO, MT, NE, NV, ND, OH, OK, OR, SD, TX, UT, WI, WY. INCORPORATED IN: Iowa.

Federal Insurance Company. BUSINESS ADDRESS: P.O. Box 1615, 15 Mountain View Road, Warren, NJ 07061-1615. PHONE: (908) 580-2000. UNDERWRITING LIMITATION b/: $162,334,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Indiana.

FEDERATED MUTUAL INSURANCE COMPANY. BUSINESS ADDRESS: 121 East Park Square, Owatonna, MN 55060. PHONE: (507) 455-5200. UNDERWRITING LIMITATION b/: $44,241,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Minnesota.

See Footnotes/Notes at end of Circular

Fidelity and Casualty Company of New York (The). BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $14,298,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

Fidelity and Deposit Company of Maryland. BUSINESS ADDRESS: 210 North Charles Street, Baltimore, MD 21201. PHONE: (301) 539-0800. UNDERWRITING LIMITATION b/: $24,125,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Maryland.

FIDELITY AND GUARANTY INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 1138, 100 Light Street, Baltimore, MD 21203. PHONE: (410) 547-3000. UNDERWRITING LIMITATION b/: $1,432,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Iowa.

Fidelity and Guaranty Insurance Underwriters, Inc.. BUSINESS ADDRESS: P.O. Box 1138, Baltimore, MD 21203. PHONE: (410) 547-3000. UNDERWRITING LIMITATION b/: $4,966,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SD, TN, TX, UT, VT, VA, WA, WV, WY. INCORPORATED IN: Ohio.

Fireman's Fund Insurance Company. BUSINESS ADDRESS: 777 San Marin Drive, Novato, CA 94998. PHONE: (415) 899-2000. UNDERWRITING LIMITATION b/: $143,481,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

Firemen's Insurance Company of Newark, New Jersey. BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $45,043,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Jersey.

See Footnotes/Notes at end of Circular

First Financial Insurance Company. BUSINESS ADDRESS: 401-417 Fayette Avenue, Springfield, IL 62704-2788. PHONE: (919) 538-2800. UNDERWRITING LIMITATION b/: $2,120,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, MD, MI, MN, MS, MO, MT, NE, NV, NM, ND, OH, OR, RI, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

First Insurance Company of Hawaii, Ltd.. BUSINESS ADDRESS: Post Office Box 2866, Honolulu, HI 96803. PHONE: (808) 527-7777. UNDERWRITING LIMITATION b/: $5,782,000. SURETY LICENSES c/: HI. INCORPORATED IN: Hawaii.

First National Insurance Company of America. BUSINESS ADDRESS: SAFECO Plaza, Seattle, WA 98185. PHONE: (206) 545-5000. UNDERWRITING LIMITATION b/: $5,816,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Washington.

FRONTIER INSURANCE COMPANY.1/ BUSINESS ADDRESS: 196 Broadway, Monticello, NY 12701. PHONE: (800) 836-2100. UNDERWRITING LIMITATION b/: $7,644,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

GENERAL ACCIDENT INSURANCE COMPANY (PUERTO RICO) LIMITED. BUSINESS ADDRESS: P.O. Box 363786, San Juan, PR 00936-3786. PHONE: (809) 765-8700. UNDERWRITING LIMITATION b/: $3,785,000. SURETY LICENSES c/: PR, VI. INCORPORATED IN: Puerto Rico.

GENERAL ACCIDENT INSURANCE COMPANY OF AMERICA. BUSINESS ADDRESS: 436 Walnut Street, P.O. Box 1109, Philadelphia, PA 19105-1109. PHONE: (215) 625-1000. UNDERWRITING LIMITATION b/: $81,614,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Pennsylvania.

General Insurance Company of America. BUSINESS ADDRESS: SAFECO Plaza, Seattle, WA 98185. PHONE: (206) 545-5000. UNDERWRITING LIMITATION b/: $51,268,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Washington.

See Footnotes/Notes at end of Circular

General Reinsurance Corporation. BUSINESS ADDRESS: P.O. Box 10350, 695 East Main Street, Stamford, CT 06904-2350. PHONE: (203) 328-5000. UNDERWRITING LIMITATION b/: $332,162,000. SURETY LICENSES c/: AL, AK, AZ, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, SC, SD, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Delaware.

Glens Falls Insurance Company (The). BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $2,130,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Delaware.

Global Surety & Insurance Co.. BUSINESS ADDRESS: 160 Kiewit Plaza, Omaha, NE 68131. PHONE: (402) 271-2846. UNDERWRITING LIMITATION b/: $2,923,000. SURETY LICENSES c/: AZ, CA, CO, MT, NE, SD. INCORPORATED IN: Nebraska.

Grain Dealers Mutual Insurance Company. BUSINESS ADDRESS: Post Office Box 1747, Indianapolis, IN 46206. PHONE: (317) 923-2453. UNDERWRITING LIMITATION b/: $3,837,000. SURETY LICENSES c/: AZ, AR, CO, GA, IL, IN, IA, KS, KY, LA, MN, MS, MO, NE, NV, NM, NC, OH, OK, OR, SD, TN, TX, VA, WA, WI, WY. INCORPORATED IN: Indiana.

GRAMERCY INSURANCE COMPANY. BUSINESS ADDRESS: 110 South French Street, #203, Wilmington, DE 19801. PHONE: (302) 571-0525. UNDERWRITING LIMITATION b/: $235,000. SURETY LICENSES c/: DE, LA, MD, NM, TX. INCORPORATED IN: Delaware.

Granite State Insurance Company. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (603) 645-7000. UNDERWRITING LIMITATION b/: $1,417,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, DC, FL, GA, GU, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

See Footnotes/Notes at end of Circular

Great American Insurance Company. BUSINESS ADDRESS: 580 Walnut Street, Cincinnati, OH 45202. PHONE: (513) 369-5000. UNDERWRITING LIMITATION b/: $65,257,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

Great Northern Insurance Company. BUSINESS ADDRESS: P.O. Box 1615, 15 Mountain View Road, Warren, NJ 07061-1615. PHONE: (908) 580-2000. UNDERWRITING LIMITATION b/: $8,816,000. SURETY LICENSES c/: AL, AK, AZ, AR, DC, FL, GA, HI, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, ND, OH, OK, OR, PA, RI, SC, SD, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Minnesota.

Gulf Insurance Company. BUSINESS ADDRESS: P.O. Box 1771, Dallas, TX 75221-1771. PHONE: (214) 650-2800. UNDERWRITING LIMITATION b/: $20,036,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

Hamilton Mutual Insurance Company of Cincinnati, Ohio (The). BUSINESS ADDRESS: 1520 Madison Road, Cincinnati, OH 45206-1787. PHONE: (513) 221-6010. UNDERWRITING LIMITATION b/: $944,000. SURETY LICENSES c/: IN, KY, MI, OH. INCORPORATED IN: Ohio.

Hanover Insurance Company (The). BUSINESS ADDRESS: 100 North Parkway, Worcester, MA 01605. PHONE: (508) 853-7200. UNDERWRITING LIMITATION b/: $67,123,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

HARCO NATIONAL INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 68309, Schaumburg, IL 60168-0309. PHONE: (708) 734-4261. UNDERWRITING LIMITATION b/: $3,675,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

Harleysville Mutual Insurance Company. BUSINESS ADDRESS: 355 Maple Avenue, Harleysville, PA 19438-2297. PHONE: (215) 256-5000. UNDERWRITING LIMITATION b/: $23,817,000. SURETY LICENSES c/: AL, CA, CO, DE, DC, FL, GA, IL, IN, IA, KS, KY, MD, MA, MI, MN, MS, MO, NJ, NM, NC, OH, OK, OR, PA, SC, TN, TX, UT, VA, WV, WI. INCORPORATED IN: Pennsylvania.

Hartford Accident and Indemnity Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $71,879,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Hartford Casualty Insurance Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $21,635,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

Hartford Fire Insurance Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $300,667,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Hartford Insurance Company of Illinois. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (312) 346-6000. UNDERWRITING LIMITATION b/: $11,847,000. SURETY LICENSES c/: IL, PA. INCORPORATED IN: Illinois.

Hartford Insurance Company of the Midwest. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $2,261,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MT, NE, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

See Footnotes/Notes at end of Circular

Hartford Insurance Company of the Southeast. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $2,065,000. SURETY LICENSES c/: CT, FL, GA, LA, PR. INCORPORATED IN: Florida.

Hartford Underwriters Insurance Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $15,974,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

Highlands Insurance Company. BUSINESS ADDRESS: 10370 Richmond Avenue, Houston, TX 77042-4123. PHONE: (713) 952-9555. UNDERWRITING LIMITATION b/: $19,048,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Texas.

Highlands Underwriters Insurance Company. BUSINESS ADDRESS: 10370 Richmond Avenue, Houston, TX 77042-4123. PHONE: (713) 952-9555. UNDERWRITING LIMITATION b/: $2,267,000. SURETY LICENSES c/: AL, AZ, AR, CA, FL, GA, LA, MS, NM, OK, TX. INCORPORATED IN: Texas.

Home Indemnity Company (The). BUSINESS ADDRESS: 59 Maiden Lane, 7th Floor, New York, NY 10038. PHONE: (212) 530-7000. UNDERWRITING LIMITATION b/: $9,512,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

Home Insurance Company (The). BUSINESS ADDRESS: 59 Maiden Lane, 7th Floor, New York, NY 10038. PHONE: (212) 530-7000. UNDERWRITING LIMITATION b/: $66,547,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

See Footnotes/Notes at end of Circular

Houston General Insurance Company. BUSINESS ADDRESS: Post Office Box 2932, Fort Worth, TX 76113-2932. PHONE: (817) 377-6000. UNDERWRITING LIMITATION b/: $8,453,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NM, NY, NC, ND, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI, WY. INCORPORATED IN: Texas.

Illinois National Insurance Company. BUSINESS ADDRESS: 500 West Madison Street, Chicago, IL 60606-2511. PHONE: (312) 930-5417. UNDERWRITING LIMITATION b/: $2,681,000. SURETY LICENSES c/: AK, IL, IN, IA, KY, MD, MO, MT, NE, NH, NM, NY, ND, OH, RI, SD, TX, UT, VT, WV. INCORPORATED IN: Illinois.

Indemnity Company of California. BUSINESS ADDRESS: P.O. Box 19725, Irvine, CA 92713. PHONE: (714) 263-3300. UNDERWRITING LIMITATION b/: $767,000. SURETY LICENSES c/: AZ, CA, NV, OR, WA. INCORPORATED IN: California.

Indemnity Insurance Company of North America. BUSINESS ADDRESS: 1601 Chestnut St., P.O. Box 7716, Philadelphia, PA 19192. PHONE: (215) 761-1000. UNDERWRITING LIMITATION b/: $15,251,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New York.

Indiana Lumbermens Mutual Insurance Company. BUSINESS ADDRESS: P.O. Box 68600, Indianapolis, IN 46268-1168. PHONE: (800) 428-1441. UNDERWRITING LIMITATION b/: $2,081,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NM, NC, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

Inland Insurance Company. BUSINESS ADDRESS: Post Office Box 80468, Lincoln, NE 68501. PHONE: (402) 435-4302. UNDERWRITING LIMITATION b/: $3,345,000. SURETY LICENSES c/: AZ, CO, IA, KS, MN, MT, NE, ND, OK, SD, WY. INCORPORATED IN: Nebraska.

INSURANCE COMPANY OF EVANSTON. BUSINESS ADDRESS: Shand Morahan Plaza, Evanston, IL 60201. PHONE: (708) 866-2800. UNDERWRITING LIMITATION b/: $1,147,000. SURETY LICENSES c/: AL, AZ, AR, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NM, NY, NC, ND, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

See Footnotes/Notes at end of Circular

Insurance Company of North America. BUSINESS ADDRESS: 1601 Chestnut St., P.O. Box 7716, Philadelphia, PA 19192. PHONE: (215) 761-1000. UNDERWRITING LIMITATION b/: $44,627,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

Insurance Company of the State of Pennsylvania. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (212) 770-7000. UNDERWRITING LIMITATION b/: $31,451,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

Insurance Company of the West. BUSINESS ADDRESS: Post Office Box 85563, San Diego, CA 92186-5563. PHONE: (619) 546-2400. UNDERWRITING LIMITATION b/: $10,796,000. SURETY LICENSES c/: AK, AZ, CA, CO, HI, ID, IA, MD, MI, MS, MO, MT, NE, NV, NM, OH, OK, OR, RI, SC, SD, TN, TX, UT, WA, WI, WY. INCORPORATED IN: California.

INTEGRAND ASSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 70128, San Juan, PR 00936-8128. PHONE: (809) 781-0707. UNDERWRITING LIMITATION b/: $2,856,000. SURETY LICENSES c/: PR. INCORPORATED IN: Puerto Rico.

Intercargo Insurance Company. BUSINESS ADDRESS: 1450 East American Lane, 20th Floor, Schaumburg, IL 60173. PHONE: (708) 517-2510. UNDERWRITING LIMITATION b/: $1,129,000. SURETY LICENSES c/: AK, AZ, CA, CO, DE, DC, FL, GA, IL, IN, IA, KY, LA, MD, MA, MI, MO, MT, NE, NJ, NM, NY, NC, ND, OH, OR, PA, TN, TX, VA, VI, WA, WI. INCORPORATED IN: Illinois.

International Business & Mercantile REassurance Company. BUSINESS ADDRESS: 307 N. Michigan Ave., Chicago, IL 60601. PHONE: (312) 346-8100. UNDERWRITING LIMITATION b/: $9,048,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

INTERNATIONAL CREDIT OF NORTH AMERICA REINSURANCE INC.. BUSINESS ADDRESS: 1225 Franklin Avenue, Garden City, NY 11530. PHONE: (516) 746-7676. UNDERWRITING LIMITATION b/: $4,381,000. SURETY LICENSES c/: NY. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

International Fidelity Insurance Company. BUSINESS ADDRESS: P.O. Box 56, Newark, NJ 07101-0056. PHONE: (201) 624-7200. UNDERWRITING LIMITATION b/: $2,498,000. SURETY LICENSES c/: AL, AK, AZ, AR, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WY. INCORPORATED IN: New Jersey.

ISLAND INSURANCE COMPANY, LIMITED. BUSINESS ADDRESS: P.O. Box 1520, Honolulu, HI 96806. PHONE: (808) 531-1311. UNDERWRITING LIMITATION b/: $5,331,000. SURETY LICENSES c/: HI. INCORPORATED IN: Hawaii.

ITT Lyndon Property Insurance Company. BUSINESS ADDRESS: 12555 Manchester Road, St. Louis, MO 63131. PHONE: (314) 821-6060. UNDERWRITING LIMITATION b/: $11,284,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

John Deere Insurance Company. BUSINESS ADDRESS: 3400 80th Street, Moline, IL 61265. PHONE: (309) 765-8388. UNDERWRITING LIMITATION b/: $9,407,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Kansas Bankers Surety Company (The). BUSINESS ADDRESS: Post Office Box 1654, Topeka, KS 66601-1654. PHONE: (913) 234-2631. UNDERWRITING LIMITATION b/: $2,789,000. SURETY LICENSES c/: CO, IL, IA, KS, MN, MO, MT, NE, ND, OK, SD, WI, WY. INCORPORATED IN: Kansas.

Kansas City Fire and Marine Insurance Company. BUSINESS ADDRESS: 180 Maiden Lane, New York, NY 10038. PHONE: (609) 395-2000. UNDERWRITING LIMITATION b/: $1,757,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

See Footnotes/Notes at end of Circular

KEMPER REINSURANCE COMPANY. BUSINESS ADDRESS: 1 Kemper Drive, Long Grove, IL 60049. PHONE: (708) 540-2600. UNDERWRITING LIMITATION b/: $21,602,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MI, MN, MS, NE, NV, NJ, NM, OH, OK, OR, PA, RI, TN, UT, WA, WI. INCORPORATED IN: Illinois.

Lawyers Surety Corporation. BUSINESS ADDRESS: P.O.Box 569480, Dallas, TX 75356-9480. PHONE: (214) 634-1900. UNDERWRITING LIMITATION b/: $495,000. SURETY LICENSES c/: AL, AR, CA, FL, GA, KY, MS, NC, OK, SC, TN, TX. INCORPORATED IN: Texas.

Liberty Mutual Insurance Company. BUSINESS ADDRESS: 175 Berkeley Street, Boston, MA 02117. PHONE: (617) 357-9500. UNDERWRITING LIMITATION b/: $118,261,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

Lincoln General Insurance Company. BUSINESS ADDRESS: 3350 Whiteford Road, York, PA 17402. PHONE: (717) 757-0000. UNDERWRITING LIMITATION b/: $2,031,000. SURETY LICENSES c/: AL, GA, ID, IN, IA, KS, KY, LA, MD, MN, MS, MO, MT, NE, NV, NM, ND, OH, OK, OR, PA, SC, SD, TN, UT, VA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

London Assurance of America Inc. (The). BUSINESS ADDRESS: 10 East 50th Street, 27th Floor, New York, NY 10022. PHONE: (212) 753-8130. UNDERWRITING LIMITATION b/: $17,964,000. SURETY LICENSES c/: AK, IA, ME, MI, MN, NJ, NY, ND, OH, UT, VT. INCORPORATED IN: New York.

Lumbermens Mutual Casualty Company. BUSINESS ADDRESS: 1 Kemper Drive, Long Grove, IL 60049-0001. PHONE: (708) 540-2000. UNDERWRITING LIMITATION b/: $109,072,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Massachusetts Bay Insurance Company. BUSINESS ADDRESS: 100 North Parkway, Worcester, MA 01605. PHONE: (508) 853-7200. UNDERWRITING LIMITATION b/: $1,381,000. SURETY LICENSES c/: AL, AR, CA, CO, CT, DC, FL, GA, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NH, NJ, NY, NC, OH, OK, PA, RI, SC, TN, TX, VT, VA, WA, WV, WI. INCORPORATED IN: Massachusetts.

See Footnotes/Notes at end of Circular

Merchants Bonding Company (Mutual). BUSINESS ADDRESS: 2100 Grand Avenue, Des Moines, IA 50312. PHONE: (515) 243-8171. UNDERWRITING LIMITATION b/: $1,024,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, FL, GA, ID, IL, IN, IA, KS, LA, MI, MN, MO, MT, NE, NV, NM, NC, ND, OK, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI, WY. INCORPORATED IN: Iowa.

Michigan Millers Mutual Insurance Company. BUSINESS ADDRESS: Post Office Box 30060, Lansing, MI 48909. PHONE: (517) 482-6211. UNDERWRITING LIMITATION b/: $7,483,000. SURETY LICENSES c/: AZ, AR, CA, CO, DC, FL, ID, IN, KS, KY, MI, MO, NE, NJ, NY, NC, OH, OK, PA, TX, UT, VA, WA. INCORPORATED IN: Michigan.

Mid-Century Insurance Company. BUSINESS ADDRESS: Post Office Box 2478, Terminal Annex, Los Angeles, CA 90051. PHONE: (213) 932-3200. UNDERWRITING LIMITATION b/: $3,926,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, ID, IL, IN, IA, KS, MI, MN, MO, MT, NE, NV, NM, ND, OH, OK, OR, SD, TN, TX, UT, WA, WI, WY. INCORPORATED IN: California.

MID-CONTINENT CASUALTY COMPANY. BUSINESS ADDRESS: Post Office Box 1409, Tulsa, OK 74101. PHONE: (918) 587-7221. UNDERWRITING LIMITATION b/: $3,678,000. SURETY LICENSES c/: AL, AZ, AR, CO, IL, IN, IA, KS, MN, MS, MO, MT, NE, NM, ND, OK, TX, UT, WA, WY. INCORPORATED IN: Oklahoma.

Millers Mutual Fire Insurance Company of Texas (The). BUSINESS ADDRESS: Post Office Box 2269, Fort Worth, TX 76113-2269. PHONE: (817) 332-7761. UNDERWRITING LIMITATION b/: $6,571,000. SURETY LICENSES c/: CO, DC, ID, IL, IN, IA, LA, MI, NE, NM, OK, OR, TN, TX, WY. INCORPORATED IN: Texas.

Millers' Mutual Insurance Association of Illinois. BUSINESS ADDRESS: 111 East Fourth Street, P.O. Box 9006, Alton, IL 62002-9006. PHONE: (618) 463-3636. UNDERWRITING LIMITATION b/: $3,974,000. SURETY LICENSES c/: AL, AR, CO, GA, IL, IN, IA, KS, KY, LA, MN, MS, MO, MT, NE, NC, ND, OH, SD, TN, TX, WI. INCORPORATED IN: Illinois.

Minnesota Trust Company of Austin. BUSINESS ADDRESS: P.O. Box 463, Austin, MN 55912-0463. PHONE: (507) 437-3231. UNDERWRITING LIMITATION b/: $160,000. SURETY LICENSES c/: CO, MN, MT, ND. INCORPORATED IN: Minnesota.

See Footnotes/Notes at end of Circular

MOTORS INSURANCE CORPORATION. BUSINESS ADDRESS: 3044 West Grand Boulevard, Detroit, MI 48202. PHONE: (313) 556-5000. UNDERWRITING LIMITATION b/: $81,569,000. SURETY LICENSES c/: AL, AK, AZ, AR, DE, DC, FL, GA, ID, IL, IN, IA, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

Munich American Reinsurance Company. BUSINESS ADDRESS: 560 Lexington Avenue, New York, NY 10022. PHONE: (212) 310-1600. UNDERWRITING LIMITATION b/: $27,255,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, GA, HI, ID, IL, IN, IA, KS, KY, LA, MI, MN, MS, MT, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SD, TN, TX, UT, VT, VA WA, WV, WI. INCORPORATED IN: New York.

NAC Reinsurance Corporation. BUSINESS ADDRESS: P. O. Box 2568, One Greenwich Plaza, Greenwich, CT 06836-2568. PHONE: (203) 622-5200. UNDERWRITING LIMITATION b/: $38,403,000. SURETY LICENSES c/: AL, AK, AZ, CA, CO, DE, FL, ID, IL, IN, IA, KY, ME, MD, MA, MI, MN, MS, MT, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SD, TN, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

National American Insurance Company. BUSINESS ADDRESS: 1008 Manvel Avenue, Chandler, OK 74834. PHONE: (405) 258-0804. UNDERWRITING LIMITATION b/: $1,460,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NM, NY, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Nebraska.

National-Ben Franklin Insurance Company of Illinois. BUSINESS ADDRESS: 200 South Wacker Drive, Chicago, IL 60606. PHONE: (312) 876-5250. UNDERWRITING LIMITATION b/: $12,364,000. SURETY LICENSES c/: DC, IL, IN, IA, KY, MD, MI, MN, NY, NC, ND, RI, SD, WI. INCORPORATED IN: Illinois.

National Fire Insurance Company of Hartford. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $38,160,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

See Footnotes/Notes at end of Circular

National Grange Mutual Insurance Company. BUSINESS ADDRESS: 55 West Street, Keene, NH 03431. PHONE: (603) 352-4000. UNDERWRITING LIMITATION b/: $10,667,000. SURETY LICENSES c/: CT, DE, DC, ME, MD, MA, MI, NH, NY, NC, OH, PA, RI, SC, TN, VT, VA, WV, WI. INCORPORATED IN: New Hampshire.

National Indemnity Company. BUSINESS ADDRESS: 3024 Harney Street, Omaha, NE 68131. PHONE: (402) 536-3000. UNDERWRITING LIMITATION b/: $399,774,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Nebraska.

NATIONAL REINSURANCE CORPORATION. BUSINESS ADDRESS: 777 Long Ridge Road, P.O. Box 10167, Stamford, CT 06904-2167. PHONE: (203) 329-7700. UNDERWRITING LIMITATION b/: $32,121,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, DE, DC, FL, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MT, NE, NV, NJ, NY, NC, ND, OH, OK, PA, PR, RI, SC, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Delaware.

National Surety Corporation. BUSINESS ADDRESS: 200 West Monroe Street, Chicago, IL 60606. PHONE: (312) 580-6000. UNDERWRITING LIMITATION b/: $9,116,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

National Union Fire Insurance Company of Pittsburgh, PA. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (212) 770-7000. UNDERWRITING LIMITATION b/: $90,329,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

Nationwide Mutual Insurance Company. BUSINESS ADDRESS: One Nationwide Plaza, Columbus, OH 43216. PHONE: (614) 249-7111. UNDERWRITING LIMITATION b/: $129,932,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

See Footnotes/Notes at end of Circular

NAVIGATORS INSURANCE COMPANY. BUSINESS ADDRESS: 123 William Street, New York, NY 10038. PHONE: (212) 406-2900. UNDERWRITING LIMITATION b/: $5,730,000. SURETY LICENSES c/: AK, AZ, DE, DC, GA, IL, IN, IA, KS, KY, MD, MA, MI, MS, MO, NE, NJ, NY, ND, OH, OK, OR, PA, RI, SD, TN, TX, VA, WA, WI. INCORPORATED IN: New York.

Netherlands Insurance Company (The). BUSINESS ADDRESS: 62 Maple Avenue, Keene, NH 03431. PHONE: (603) 352-3221. UNDERWRITING LIMITATION b/: $1,578,000. SURETY LICENSES c/: AZ, CA, CT, DC, GA, ID, IN, IA, KY, ME, MD, MI, NV, NH, NJ, NY, NC, OH, RI, SC, UT, VT, VA, WA, WI. INCORPORATED IN: New Hampshire.

New Hampshire Insurance Company. BUSINESS ADDRESS: 70 Pine Street, New York, NY 10270. PHONE: (603) 645-7000. UNDERWRITING LIMITATION b/: $39,502,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

Nobel Insurance Company. BUSINESS ADDRESS: P.O. Box 6108, Columbia, SC 29260-6108. PHONE: (803) 782-2373. UNDERWRITING LIMITATION b/: $1,691,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: South Carolina.

North American Reinsurance Corporation. BUSINESS ADDRESS: 237 Park Avenue, New York, NY 10017. PHONE: (212) 907-8000. UNDERWRITING LIMITATION b/: $19,472,000. SURETY LICENSES c/: AL, AK, AZ, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NJ, NY, NC, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VT, VA, WA, WI. INCORPORATED IN: New York.

NORTH AMERICAN SPECIALTY INSURANCE COMPANY. BUSINESS ADDRESS: 650 Elm Street, 6th Floor, Manchester, NH 03101-2524. PHONE: (603) 644-6600. UNDERWRITING LIMITATION b/: $1,859,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

See Footnotes/Notes at end of Circular

North Star Reinsurance Corporation. BUSINESS ADDRESS: 100 Campus Drive, P.O. Box 853, Florham Park, NJ 07932-0853. PHONE: (201) 301-8000. UNDERWRITING LIMITATION b/: $11,539,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, GA, ID, IL, IN, IA, KS, KY, MD, MI, MN, MS, MT, NE, NV, NJ, NM, NY, ND, OH, OK, OR, PA, RI, SC, SD, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Delaware.

Northbrook Property and Casualty Insurance Company. BUSINESS ADDRESS: Allstate Plaza, Northbrook, IL 60062. PHONE: (708) 402-5000. UNDERWRITING LIMITATION b/: $16,648,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Northern Assurance Company of America (The). BUSINESS ADDRESS: One Beacon Street, Boston, MA 02108. PHONE: (617) 725-6000. UNDERWRITING LIMITATION b/: $17,049,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Massachusetts.

NORTHWESTERN PACIFIC INDEMNITY COMPANY. BUSINESS ADDRESS: 15 Mountain View Road, P.O. Box 1615, Warren, NJ 07061-1615. PHONE: (503) 221-4240. UNDERWRITING LIMITATION b/: $2,070,000. SURETY LICENSES c/: CA, OK, OR, TX, WA. INCORPORATED IN: Oregon.

Oceanic Insurance and Surety Company.2/ BUSINESS ADDRESS: 1450 E. American Lane, 20th Floor, Schaumburg, IL 60173. PHONE: (708) 517-2510. UNDERWRITING LIMITATION b/: $522,000. SURETY LICENSES c/: IL, NM. INCORPORATED IN: ILLINOIS.

Ohio Casualty Insurance Company (The). BUSINESS ADDRESS: 136 North Third Street, Hamilton, OH 45025. PHONE: (513) 867-3000. UNDERWRITING LIMITATION b/: $67,421,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Ohio.

See Footnotes/Notes at end of Circular

Ohio Farmers Insurance Company. BUSINESS ADDRESS: P.O. Box 5001, Westfield Center, OH 44251-5001. PHONE: (216) 887-0101. UNDERWRITING LIMITATION b/: $37,609,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

Oklahoma Surety Company. BUSINESS ADDRESS: Post Office Box 1409, Tulsa, OK 74101. PHONE: (918) 587-7221. UNDERWRITING LIMITATION b/: $679,000. SURETY LICENSES c/: KS, OK, TX. INCORPORATED IN: Oklahoma.

Old Republic Insurance Company. BUSINESS ADDRESS: Post Office Box 789, Greensburg, PA 15601-0789. PHONE: (412) 834-5000. UNDERWRITING LIMITATION b/: $31,073,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

Old Republic Surety Company. BUSINESS ADDRESS: P.O. Box 1635, Milwaukee, WI 53201. PHONE: (414) 797-2640. UNDERWRITING LIMITATION b/: $1,282,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DC, GA, ID, IL, IN, IA, KS, MD, MN, MS, MO, MT, NE, NV, NM, NC, OH, OK, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI, WY. INCORPORATED IN: Wisconsin.

Omaha Property and Casualty Insurance Company.3/ BUSINESS ADDRESS: 3102 Farnam Street, Omaha, NE 68131. PHONE: (402) 342-3326. UNDERWRITING LIMITATION b/: $2,451,000. SURETY LICENSES c/: AL, AK, AZ, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KY, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NM, NY, NC, ND, OH, PA, RI, SD, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Nebraska.

Pacific Employers Insurance Company. BUSINESS ADDRESS: 1601 Chestnut Street, P.O. Box 7716, Philadelphia, PA 19192. PHONE: (215) 761-1000. UNDERWRITING LIMITATION b/: $18,512,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: California.

See Footnotes/Notes at end of Circular

Pacific Indemnity Company. BUSINESS ADDRESS: P.O. Box 1615, 15 Mountain View Road, Warren, NJ 07061-1615. PHONE: (908) 580-2000. UNDERWRITING LIMITATION b/: $36,225,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

Pacific Insurance Company, Limited. BUSINESS ADDRESS: 1001 Bishop Street, Honolulu, HI 96807. PHONE: (808) 546-5700. UNDERWRITING LIMITATION b/: $25,228,000. SURETY LICENSES c/: HI. INCORPORATED IN: Hawaii.

Peerless Insurance Company. BUSINESS ADDRESS: 62 Maple Avenue, Keene, NH 03431. PHONE: (603) 352-3221. UNDERWRITING LIMITATION b/: $9,351,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New Hampshire.

Pekin Insurance Company. BUSINESS ADDRESS: 2505 Court Street, Pekin, IL 61558. PHONE: (309) 346-1161. UNDERWRITING LIMITATION b/: $2,624,000. SURETY LICENSES c/: IL, IN, IA, WI. INCORPORATED IN: Illinois.

Pennsylvania Manufacturers' Association Insurance Company. BUSINESS ADDRESS: 925 Chestnut Street, Philadelphia, PA 19107. PHONE: (215) 629-5177. UNDERWRITING LIMITATION b/: $12,215,000. SURETY LICENSES c/: AK, AZ, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KY, LA, MD, MA, MI, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, OH, OK, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Pennsylvania.

Pennsylvania Millers Mutual Insurance Company. BUSINESS ADDRESS: 72 North Franklin Street, Wilkes-Barre, PA 18773-0016. PHONE: (717) 822-8111. UNDERWRITING LIMITATION b/: $3,626,000. SURETY LICENSES c/: DC, FL, GA, ID, KY, ME, MD, MA, MS, MO, NH, NJ, NY, NC, ND, PA, RI, SC, TN, UT, VT, VA, WA. INCORPORATED IN: Pennsylvania.

Pennsylvania National Mutual Casualty Insurance Company. BUSINESS ADDRESS: P.O. Box 2361, Harrisburg, PA 17105-2361. PHONE: (717) 234-4941. UNDERWRITING LIMITATION b/: $16,879,000. SURETY LICENSES c/: AL, AK, AZ, AR, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NJ, NM, NY, NC, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Pennsylvania.

See Footnotes/Notes at end of Circular

Personal Service Insurance Co. (The). BUSINESS ADDRESS: P.O. BOX 1226, Columbus, OH 43216-1226. PHONE: (614) 221-5115. UNDERWRITING LIMITATION b/: $2,829,000. SURETY LICENSES c/: IN, OH. INCORPORATED IN: OHIO.

Phoenix Assurance Company of New York. BUSINESS ADDRESS: 4 World Trade Center, SUITE: 6274, New York, NY 10048. PHONE: (212) 775-1300. UNDERWRITING LIMITATION b/: $5,542,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI WY. INCORPORATED IN: New Hampshire.

Phoenix Insurance Company (The). BUSINESS ADDRESS: One Tower Square, Hartford, CT 06183-6014. PHONE: (203) 277-0111. UNDERWRITING LIMITATION b/: $46,705,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

PLANET INDEMNITY COMPANY. BUSINESS ADDRESS: 410 17th Street, SUITE: 1675, Denver, CO 80202. PHONE: (713) 961-1300. UNDERWRITING LIMITATION b/: $504,000. SURETY LICENSES c/: AL, CO, IL, IN, KS, KY, NV, NM, OR, SD, TX. INCORPORATED IN: Colorado.

PLANET INSURANCE COMPANY. BUSINESS ADDRESS: 4 Penn Center Plaza, Philadelphia, PA 19103. PHONE: (215) 864-4000. UNDERWRITING LIMITATION b/: $6,615,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Wisconsin.

PREFERRED NATIONAL INSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 407003, FT Lauderdale, FL 33340-7003. PHONE: (305) 752-1222. UNDERWRITING LIMITATION b/: $672,000. SURETY LICENSES c/: FL. INCORPORATED IN: FLORIDA.

Progressive Casualty Insurance Company. BUSINESS ADDRESS: 6000 Parkland Boulevard, Mayfield Hts., OH 44124. PHONE: (216) 464-8000. UNDERWRITING LIMITATION b/: $2,103,000. SURETY LICENSES c/: AL, AK, AZ, CA, CO, CT, DE, DC, FL, GA, GU, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

See Footnotes/Notes at end of Circular

PROTECTION MUTUAL INSURANCE COMPANY. BUSINESS ADDRESS: 300 S. Northwest Highway, Park Ridge, IL 60068. PHONE: (708) 825-4474. UNDERWRITING LIMITATION b/: $30,362,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Protective Insurance Company. BUSINESS ADDRESS: 1099 North Meridian Street, Indianapolis, IN 46204. PHONE: (317) 636-9800. UNDERWRITING LIMITATION b/: $14,081,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

Prudential Reinsurance Company. BUSINESS ADDRESS: 3 Gateway Center, Newark, NJ 07102-4077. PHONE: (201) 802-8000. UNDERWRITING LIMITATION b/: $39,536,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WI. INCORPORATED IN: Delaware.

Reinsurance Corporation of New York (The). BUSINESS ADDRESS: 80 Maiden Lane, New York, NY 10038. PHONE: (212) 363-4440. UNDERWRITING LIMITATION b/: $5,760,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

Reliance Insurance Company. BUSINESS ADDRESS: 4 Penn Center Plaza, Philadelphia, PA 19103. PHONE: (215) 864-4000. UNDERWRITING LIMITATION b/: $58,941,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

Reliance Insurance Company of New York. BUSINESS ADDRESS: 4 Penn Center Plaza, Philadelphia, PA 19103. PHONE: (215) 864-4000. UNDERWRITING LIMITATION b/: $1,445,000. SURETY LICENSES c/: NY. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

Republic Western Insurance Company. BUSINESS ADDRESS: 2721 North Central Avenue, Phoenix, AZ 85004-1120. PHONE: (602) 263-6755. UNDERWRITING LIMITATION b/: $10,179,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Arizona.

Royal Indemnity Company. BUSINESS ADDRESS: 9300 Arrowpoint Blvd., P.O. Box 1000, Charlotte, NC 28201-1000. PHONE: (704) 522-2000. UNDERWRITING LIMITATION b/: $11,764,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Delaware.

SAFECO Insurance Company of America. BUSINESS ADDRESS: SAFECO Plaza, Seattle, WA 98185. PHONE: (206) 545-5000. UNDERWRITING LIMITATION b/: $72,027,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WV, WI, WY. INCORPORATED IN: Washington.

SAFECO Insurance Company of Illinois. BUSINESS ADDRESS: SAFECO PLAZA, Seattle, WA 98185. PHONE: (708) 490-2900. UNDERWRITING LIMITATION b/: $8,203,000. SURETY LICENSES c/: AZ, CO, IL, KS, KY, MD, MI, MN, MS, NE, NM, OH, OR, PA, TN, TX, UT, WI, WY. INCORPORATED IN: Illinois.

SAFECO National Insurance Company. BUSINESS ADDRESS: SAFECO Plaza, Seattle, WA 98185. PHONE: (206) 545-5000. UNDERWRITING LIMITATION b/: $4,756,000. SURETY LICENSES c/: CO, KY, MD, MO, NY, UT, WI. INCORPORATED IN: Missouri.

SCOR REINSURANCE COMPANY. BUSINESS ADDRESS: 110 William Street, Suite 1800, New York, NY 10038. PHONE: (212) 978-8200. UNDERWRITING LIMITATION b/: $10,149,000. SURETY LICENSES c/: AL, AZ, DE, ID, IL, IN, IA, LA, MI, MS, NE, NM, NY, NC, OH, OK, OR, PA, TX. INCORPORATED IN: New York.

Sea Insurance Company of America (The). BUSINESS ADDRESS: 10 East 50th Street, 27th Floor, New York, NY 10022. PHONE: (212) 753-8130. UNDERWRITING LIMITATION b/: $10,055,000. SURETY LICENSES c/: AK, AZ, AR, CA, CT, DE, FL, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SD, TN, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

Seaboard Surety Company. BUSINESS ADDRESS: Burnt Mills Road and Route 206, Bedminster, NJ 07921. PHONE: (908) 658-3500. UNDERWRITING LIMITATION b/: $10,130,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New York.

SECURITY INSURANCE COMPANY OF HARTFORD. BUSINESS ADDRESS: P.O. Box 420, Hartford, CT 06141. PHONE: (203) 674-6600. UNDERWRITING LIMITATION b/: $9,695,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, MO, MT, NE, NV, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: CONNECTICUT.

Security National Insurance Company. BUSINESS ADDRESS: Post Office Box 655028, Dallas, TX 75265-5028. PHONE: (214) 360-8000. UNDERWRITING LIMITATION b/: $1,219,000. SURETY LICENSES c/: AL, AR, CA, CO, GA, ID, IL, IN, KS, KY, MO, MT, NM, OH, OK, TX, WY. INCORPORATED IN: Texas.

Select Insurance Company. BUSINESS ADDRESS: Post Office Box 1771, Dallas, TX 75221-1771. PHONE: (214) 650-2800. UNDERWRITING LIMITATION b/: $1,830,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KY, LA, MD, MI, MS, MO, MT, NE, NV, NM, NC, OH, OR, SC, SD, TN, TX, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Texas.

Selective Insurance Company of America. BUSINESS ADDRESS: Wantage Avenue, Branchville, NJ 07890. PHONE: (201) 948-3000. UNDERWRITING LIMITATION b/: $12,990,000. SURETY LICENSES c/: AL, DE, DC, FL, GA, MD, MS, NJ, NY, NC, PA, SC, TX, VA. INCORPORATED IN: New Jersey.

SENTINEL INSURANCE COMPANY, LTD.. BUSINESS ADDRESS: 1001 Bishop Street, Honolulu, HI 96807. PHONE: (808) 546-5700. UNDERWRITING LIMITATION b/: $1,301,000. SURETY LICENSES c/: HI. INCORPORATED IN: Hawaii.

Sentry Insurance A Mutual Company. BUSINESS ADDRESS: 1800 North Point Drive, Stevens Point, WI 54481. PHONE: (715) 346-6000. UNDERWRITING LIMITATION b/: $83,122,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Wisconsin.

See Footnotes/Notes at end of Circular

Skandia America Reinsurance Corporation. BUSINESS ADDRESS: One Liberty Plaza, New York, NY 10006. PHONE: (212) 978-4700. UNDERWRITING LIMITATION b/: $22,045,000. SURETY LICENSES c/: AL, AZ, CA, DE, DC, GA, ID, IL, IN, IA, MI, MS, MT, NE, NY, OH, OK, OR, PA, TN, TX, UT, VA, WA, WI. INCORPORATED IN: Delaware.

SOREMA NORTH AMERICA REINSURANCE COMPANY. BUSINESS ADDRESS: 199 Water Street, New York, NY 10038-3526. PHONE: (212) 480-1900. UNDERWRITING LIMITATION b/: $10,272,000. SURETY LICENSES c/: AK, AZ, DC, ID, IL, KS, MI, MS, MT, NE, NM, NY, OH, OR, RI, TN, TX, UT, WA, WI. INCORPORATED IN: New York.

St. Paul Fire and Marine Insurance Company. BUSINESS ADDRESS: 385 Washington Street, St. Paul, MN 55102. PHONE: (612) 221-7911. UNDERWRITING LIMITATION b/: $164,250,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Minnesota.

ST. PAUL GUARDIAN INSURANCE COMPANY. BUSINESS ADDRESS: 385 Washington Street, St. Paul, MN 55102. PHONE: (612) 221-7911. UNDERWRITING LIMITATION b/: $2,470,000. SURETY LICENSES c/: AL, AK, AZ, AR, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NM, NY, NC, ND, OH, OK, OR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Minnesota.

St. Paul Mercury Insurance Company. BUSINESS ADDRESS: 385 Washington Street, St. Paul, MN 55102. PHONE: (612) 221-7911. UNDERWRITING LIMITATION b/: $4,706,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Minnesota.

Standard Fire Insurance Company (The). BUSINESS ADDRESS: 151 Farmington Avenue, Hartford, CT 06156. PHONE: (203) 273-0123. UNDERWRITING LIMITATION b/: $42,343,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

See Footnotes/Notes at end of Circular

Star Insurance Company. BUSINESS ADDRESS: 26600 Telegraph Road, Southfield, MI 48034. PHONE: (313) 358-4020. UNDERWRITING LIMITATION b/: $2,463,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Michigan.

State Automobile Mutual Insurance Company. BUSINESS ADDRESS: 518 East Broad Street, Columbus, OH 43215-3976. PHONE: (614) 464-5000. UNDERWRITING LIMITATION b/: $30,528,000. SURETY LICENSES c/: AL, AZ, CO, FL, GA, IL, IN, IA, KS, KY, MD, MI, MN, MS, MO, MT, NE, NC, ND, OH, PA, SC, SD, TN, VA, WV, WI, WY. INCORPORATED IN: Ohio.

State Farm Fire and Casualty Company. BUSINESS ADDRESS: 112 East Washington Street, Bloomington, IL 61701. PHONE: (309) 766-2311. UNDERWRITING LIMITATION b/: $144,251,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Illinois.

State Surety Company. BUSINESS ADDRESS: P.O. Box 1976, Des Moines, IA 50306. PHONE: (515) 270-0009. UNDERWRITING LIMITATION b/: $380,000. SURETY LICENSES c/: AZ, CO, DC, ID, IL, IA, KS, MN, MO, MT, NE, NM, ND, OK, SD, WI, WY. INCORPORATED IN: Iowa.

Statewide Insurance Company. BUSINESS ADDRESS: P.O. Box 799, Waukegan, IL 60079. PHONE: (708) 662-0073. UNDERWRITING LIMITATION b/: $501,000. SURETY LICENSES c/: AZ, AR, IL, IN, IA, MO, NE, WI. INCORPORATED IN: Illinois.

SUN INSURANCE COMPANY OF NEW YORK. BUSINESS ADDRESS: 4 World Trade Center, New York, NY 10048. PHONE: (212) 775-1300. UNDERWRITING LIMITATION b/: $6,182,000. SURETY LICENSES c/: AK, AZ, CA, CT, DE, DC, GA, IL, IA, KY, LA, ME, MD, MA, MI, MN, MO, MT, NJ, NY, OH, OK, OR, PA, PR, RI, SC, TN, TX, VA, WA, WI. INCORPORATED IN: New York.

Sun Insurance Office of America Inc.. BUSINESS ADDRESS: 10 East 50th Street, 27th Floor, New York, NY 10022. PHONE: (212) 753-8130. UNDERWRITING LIMITATION b/: $6,899,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, ND, OH, OK, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

Surety Company of the Pacific. BUSINESS ADDRESS: Post Office Box 1067, Northridge, CA 91328. PHONE: (818) 894-7878. UNDERWRITING LIMITATION b/: $500,000. SURETY LICENSES c/: CA. INCORPORATED IN: California.

TEXAS PACIFIC INDEMNITY COMPANY. BUSINESS ADDRESS: Diamond Shamrock Tower, 717 North Harwood, Dallas, TX 75201. PHONE: (214) 754-0777. UNDERWRITING LIMITATION b/: $505,000. SURETY LICENSES c/: AR, TX. INCORPORATED IN: Texas.

Titan Indemnity Company. BUSINESS ADDRESS: P.O. Box 60007, San Antonio, TX 78209. PHONE: (800) 347-4740. UNDERWRITING LIMITATION b/: $2,024,000. SURETY LICENSES c/: AL, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, PA, SC, SD, TN, TX, UT, VT, VA, WA, WI, WY. INCORPORATED IN: Texas.

Transamerica Insurance Company. BUSINESS ADDRESS: 6300 Canoga Avenue, Woodland Hills, CA 91367. PHONE: (818) 596-5000. UNDERWRITING LIMITATION b/: $29,500,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: California.

Transamerica Insurance Company of Michigan. BUSINESS ADDRESS: 70 West Michigan Avenue, Battle Creek, MI 49017. PHONE: (818) 596-5000. UNDERWRITING LIMITATION b/: $2,037,000. SURETY LICENSES c/: AR, ID, IL, IN, IA, KS, KY, MI, MN, NY, SD, TX, UT, WY. INCORPORATED IN: Michigan.

Transamerica Premier Insurance Company. BUSINESS ADDRESS: 333 South Anita Drive, Orange, CA 92668. PHONE: (818) 596-5000. UNDERWRITING LIMITATION b/: $11,850,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: California.

TRANSATLANTIC REINSURANCE COMPANY. BUSINESS ADDRESS: 80 Pine Street, New York, NY 10005. PHONE: (212) 770-7000. UNDERWRITING LIMITATION b/: $23,665,000. SURETY LICENSES c/: CT, DC, FL, IL, IN, IA, NV, NJ, NM, NY, OH, OK, PA. INCORPORATED IN: New York.

See Footnotes/Notes at end of Circular

Transcontinental Insurance Company. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $15,538,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

Transportation Insurance Company. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $5,853,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WI, WY. INCORPORATED IN: Illinois.

Travelers Indemnity Company (The). BUSINESS ADDRESS: One Tower Square, Hartford, CT 06183-6014. PHONE: (203) 277-0111. UNDERWRITING LIMITATION b/: $112,241,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Connecticut.

TRAVELERS INDEMNITY COMPANY OF AMERICA (THE). BUSINESS ADDRESS: One Tower Square, Hartford, CT 06183-6014. PHONE: (203) 277-0111. UNDERWRITING LIMITATION b/: $7,345,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Georgia.

Travelers Indemnity Company of Illinois (The). BUSINESS ADDRESS: 200 West Madison Street, Chicago, IL 60606. PHONE: (312) 750-2863. UNDERWRITING LIMITATION b/: $3,902,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Illinois.

Travelers Indemnity Company of Rhode Island (The). BUSINESS ADDRESS: One Tower Square, Hartford, CT 06183-6014. PHONE: (203) 277-0111. UNDERWRITING LIMITATION b/: $17,611,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Rhode Island.

See Footnotes/Notes at end of Circular

Tri-State Insurance Company of Minnesota. BUSINESS ADDRESS: One Roundwind Road, Luverne, MN 56156. PHONE: (507) 283-9561. UNDERWRITING LIMITATION b/: $4,178,000. SURETY LICENSES c/: IL, IN, IA, MN, MO, NE, ND, OH, SD, WI. INCORPORATED IN: Minnesota.

Trinity Universal Insurance Company. BUSINESS ADDRESS: Post Office Box 655028, Dallas, TX 75265-5028. PHONE: (214) 360-8000. UNDERWRITING LIMITATION b/: $29,302,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, GA, ID, IL, IN, IA, KS, KY, LA, MI, MS, MO, MT, NE, NM, OH, OK, TN, TX, WA, WY. INCORPORATED IN: Texas.

Trinity Universal Insurance Company of Kansas, Inc. BUSINESS ADDRESS: P.O. Box 655028, Dallas, TX 75265-5028. PHONE: (214) 360-8000. UNDERWRITING LIMITATION b/: $645,000. SURETY LICENSES c/: AL, AR, CO, GA, ID, KS, KY, LA, MO, MT, NE, OH, OK, TX. INCORPORATED IN: Kansas.

Trumbull Insurance Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $1,966,000. SURETY LICENSES c/: AL, AK, CT, DE, DC, IN, MA, MN, MO, NE, NJ, OK, PA, RI, WY. INCORPORATED IN: Connecticut.

Twin City Fire Insurance Company. BUSINESS ADDRESS: Hartford Plaza, Hartford, CT 06115. PHONE: (203) 547-5000. UNDERWRITING LIMITATION b/: $7,912,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Indiana.

U.S. Capital Insurance Company.4/ BUSINESS ADDRESS: 4 West Red Oak Lane, White Plains, NY 10604-3602. PHONE: (914) 694-4757. UNDERWRITING LIMITATION b/: $1,634,000. SURETY LICENSES c/: AL, AZ, CA, DE, DC, FL, GA, ID, IN, IA, LA, MD, MI, MT, NE, NV, NM, NY, ND, OH, PA, SD, TN, TX, UT, VA, WI. INCORPORATED IN: NEW YORK.

ULICO CASUALTY COMPANY. BUSINESS ADDRESS: 111 Massachusetts Avenue, NW, Washington, DC 20001. PHONE: (202) 682-0900. UNDERWRITING LIMITATION b/: $5,179,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, ND, OH, OK, OR, PA, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Delaware.

See Footnotes/Notes at end of Circular

Underwriters Indemnity Company. BUSINESS ADDRESS: 8 Greenway Plaza, SUITE: 400, Houston, TX 77046. PHONE: (713) 961-1300. UNDERWRITING LIMITATION b/: $417,000. SURETY LICENSES c/: AL, IL, IN, KS, KY, LA, MS, MO, MT, NE, NV, NM, ND, OH, OK, OR, SD, TN, TX, UT, WV, WI, WY. INCORPORATED IN: Texas.

UNDERWRITERS REINSURANCE COMPANY. BUSINESS ADDRESS: P.O. Box 4030, Woodland Hills, CA 91365. PHONE: (818) 225-1000. UNDERWRITING LIMITATION b/: $18,073,000. SURETY LICENSES c/: AZ, CA, DE, DC, GA, ID, IL, IA, KS, LA, MI, MS, MT, NE, NV, NJ, NY, OH, PA, TX, UT, WI. INCORPORATED IN: New Hampshire.

Unigard Security Insurance Company. BUSINESS ADDRESS: 15805 N.E. 24th Street, Bellevue, WA 98008-2409. PHONE: (206) 641-4321. UNDERWRITING LIMITATION b/: $6,503,000. SURETY LICENSES c/: AL, AK, AZ, AR, CO, CT, DE, DC, FL, GA, IN, IA, KS, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NM, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI. INCORPORATED IN: Washington.

Union Insurance Company. BUSINESS ADDRESS: P.O. Box 80439, Lincoln, NE 68501-0439. PHONE: (402) 476-7688. UNDERWRITING LIMITATION b/: $2,251,000. SURETY LICENSES c/: AR, CO, DC, ID, IA, KS, MD, MN, MO, MT, NE, ND, OK, SD, TX, UT, VA, WA, WY. INCORPORATED IN: Nebraska.

United Capitol Insurance Company.5/ BUSINESS ADDRESS: 1400 Lake Hearn Drive, Atlanta, GA 30319. PHONE: (404) 843-5599. UNDERWRITING LIMITATION b/: $6,239,000. SURETY LICENSES c/: AZ, WI. INCORPORATED IN: Wisconsin.

United Coastal Insurance Company. BUSINESS ADDRESS: P.O. Box 2350, 233 Main Street, New Britain, CT 06050-2350. PHONE: (203) 223-5000. UNDERWRITING LIMITATION b/: $3,623,000. SURETY LICENSES c/: AZ. INCORPORATED IN: Arizona.

United Fire & Casualty Company. BUSINESS ADDRESS: P.O. Box 73909, Cedar Rapids, IA 52407. PHONE: (319) 399-5700. UNDERWRITING LIMITATION b/: $10,334,000. SURETY LICENSES c/: AK, AZ, AR, CA, CO, CT, ID, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, ND, OH, OK, OR, SC, SD, TX, UT, WA, WI, WY. INCORPORATED IN: Iowa.

UNITED NATIONAL INSURANCE COMPANY. BUSINESS ADDRESS: Three Bala Plaza East, SUITE: 300, Bala Cynwyd, PA 19004. PHONE: (215) 664-1500. UNDERWRITING LIMITATION b/: $11,611,000. SURETY LICENSES c/: PA. INCORPORATED IN: Pennsylvania.

See Footnotes/Notes at end of Circular

United Pacific Insurance Company.6/ BUSINESS ADDRESS: 4 Penn Center Plaza, Philadelphia, PA 19103. PHONE: (215) 864-4000. UNDERWRITING LIMITATION b/: $4,643,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, GU, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

United Pacific Insurance Company of New York. BUSINESS ADDRESS: 4 Penn Center Plaza, Philadelphia, PA 19103. PHONE: (215) 864-4000. UNDERWRITING LIMITATION b/: $1,635,000. SURETY LICENSES c/: NY. INCORPORATED IN: New York.

United States Fidelity and Guaranty Company. BUSINESS ADDRESS: Post Office Box 1138, 100 Light Street, Baltimore, MD 21203. PHONE: (410) 547-3000. UNDERWRITING LIMITATION b/: $82,124,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: Maryland.

UNITED SURETY AND INDEMNITY COMPANY. BUSINESS ADDRESS: P.O. Box 3432, Old San Juan Station, San Juan, PR 00902-3432. PHONE: (809) 722-8896. UNDERWRITING LIMITATION b/: $199,000. SURETY LICENSES c/: PR. INCORPORATED IN: Puerto Rico.

UNIVERSAL BONDING INSURANCE COMPANY. BUSINESS ADDRESS: 518 Stuyvesant Avenue, Lyndhurst, NJ 07071. PHONE: (201) 438-7223. UNDERWRITING LIMITATION b/: $704,000. SURETY LICENSES c/: NJ. INCORPORATED IN: New Jersey.

UNIVERSAL INSURANCE COMPANY. BUSINESS ADDRESS: G.P.O. Box 71338, San Juan, PR 00936. PHONE: (809) 793-7202. UNDERWRITING LIMITATION b/: $4,104,000. SURETY LICENSES c/: PR. INCORPORATED IN: Puerto Rico.

Universal Surety Company. BUSINESS ADDRESS: Post Office Box 80468, Lincoln, NE 68501. PHONE: (402) 435-4302. UNDERWRITING LIMITATION b/: $1,725,000. SURETY LICENSES c/: AZ, CO, ID, IL, IA, KS, MI, MN, MO, MT, NE, NM, ND, OH, OK, OR, SD, UT, WI, WY. INCORPORATED IN: Nebraska.

Universal Surety of America. BUSINESS ADDRESS: P.O. Box 1068, Houston, TX 77251-1068. PHONE: (713) 722-4600. UNDERWRITING LIMITATION b/: $512,000. SURETY LICENSES c/: AL, AK, CO, FL, KS, LA, MS, MO, OK, TN, TX. INCORPORATED IN: Texas.

See Footnotes/Notes at end of Circular

UNIVERSAL UNDERWRITERS INSURANCE COMPANY. BUSINESS ADDRESS: 6363 College Blvd., Overland Park, KS 66211. PHONE: (913) 339-1000. UNDERWRITING LIMITATION b/: $43,174,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT,

DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Missouri.

Utica Mutual Insurance Company. BUSINESS ADDRESS: P.O. Box 530, Utica, NY 13503-0530. PHONE: (315) 734-2000. UNDERWRITING LIMITATION b/: $15,971,000. SURETY LICENSES c/: AL, AK, AS, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

Valley Forge Insurance Company. BUSINESS ADDRESS: CNA Plaza, Chicago, IL 60685. PHONE: (312) 822-5000. UNDERWRITING LIMITATION b/: $12,413,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Pennsylvania.

VAN TOL SURETY COMPANY, INCORPORATED. BUSINESS ADDRESS: 424 Fifth Street, Brookings, SD 57006. PHONE: (605) 692-6294. UNDERWRITING LIMITATION b/: $186,000. SURETY LICENSES c/: SD. INCORPORATED IN: South Dakota.

Vigilant Insurance Company. BUSINESS ADDRESS: P.O. Box 1615, 15 Mountain View Road, Warren, NJ 07061-1615. PHONE: (908) 580-2000. UNDERWRITING LIMITATION b/: $23,717,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, VI, WA, WV, WI, WY. INCORPORATED IN: New York.

Washington International Insurance Company. BUSINESS ADDRESS: 1930 Thoreau Drive, SUITE: 101, Schaumburg, IL 60173. PHONE: (708) 490-1850. UNDERWRITING LIMITATION b/: $1,031,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DC, FL, GA, ID, IL, IN, KY, LA, MD, MA, MI, MS, MO, NV, NM, NY, NC, ND, OH, OK, OR, PA, SC, TN, TX, VA, WA. INCORPORATED IN: Arizona.

See Footnotes/Notes at end of Circular

West American Insurance Company. BUSINESS ADDRESS: 136 North Third Street, Hamilton, OH 45025. PHONE: (513) 867-3000. UNDERWRITING LIMITATION b/: $48,013,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, NE, NV, NJ, NM, NY, NC, ND, OH, OR, PA, SC, SD, TN, TX, UT, VA, WA, WI, WY. INCORPORATED IN: California.

Westchester Fire Insurance Company. BUSINESS ADDRESS: 211 Mt. Airy Road, Basking Ridge, NJ 07920. PHONE: (908) 204-3500. UNDERWRITING LIMITATION b/: $9,260,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: New York.

Western Surety Company. BUSINESS ADDRESS: P.O. Box 5077, Sioux Falls, SD 57117-5077. PHONE: (605) 336-0850. UNDERWRITING LIMITATION b/: $2,844,000. SURETY LICENSES c/: AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: South Dakota.

Westfield Insurance Company. BUSINESS ADDRESS: P.O. Box 5001, Westfield Ctr., OH 44251-5001. PHONE: (216) 887-0101. UNDERWRITING LIMITATION b/: $18,831,000. SURETY LICENSES c/: AL, AZ, AR, CA, CO, DE, DC, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, ND, OH, OK, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY. INCORPORATED IN: Ohio.

Westfield National Insurance Company. BUSINESS ADDRESS: P.O. Box 5001, Westfield Ctr., OH 44251-5001. PHONE: (216) 887-0101. UNDERWRITING LIMITATION b/: $5,238,000. SURETY LICENSES c/: CA, IA, OH. INCORPORATED IN: Ohio.

WINTERTHUR REINSURANCE CORPORATION OF AMERICA. BUSINESS ADDRESS: Two World Financial Center, 225 Liberty Street, 42nd Floor, New York, NY 10281. PHONE: (212) 416-5700. UNDERWRITING LIMITATION b/: $14,854,000. SURETY LICENSES c/: AL, AZ, CA, DE, DC, IL, IN, IA, KY, MI, MN, MS, MT, NE, NJ, NM, NY, ND, OH, OK, OR, PA, RI, SC, SD, TX, UT, VT, WA, WV, WI. INCORPORATED IN: NEW YORK

ZENITH INSURANCE COMPANY. BUSINESS ADDRESS: 21255 Califa Street, Woodland Hills, CA 91367. PHONE: (818) 713-1000. UNDERWRITING LIMITATION b/: $16,353,000. SURETY LICENSES c/: AZ, AR, CA, CO, HI, ID, NM, OK, OR, TX, UT. INCORPORATED IN: CALIFORNIA.

See Footnotes/Notes at end of Circular

COMPANIES HOLDING CERTIFICATES OF AUTHORITY AS ACCEPTABLE REINSURING COMPANIES UNDER SECTION 223.3(b) OF TREASURY CIRCULAR NO. 297, REVISED SEPTEMBER 1, 1978 [See Note (e)]

FOLKSAMERICA REINSURANCE COMPANY. BUSINESS ADDRESS: One Liberty Plaza, 19th Floor, New York, NY 10006. PHONE: (212) 312-2500. UNDERWRITING LIMITATION b/: $11,323,000.

Frankona Reinsurance Company, U.S. Branch. BUSINESS ADDRESS: P.O. Box 419069, Kansas City, MO 64141-6069. PHONE: (816) 471-2200. UNDERWRITING LIMITATION b/: $10,140,000.

Generali - U.S. Branch. BUSINESS ADDRESS: One Liberty Plaza, New York, NY 10006. PHONE: (212) 602-7600. UNDERWRITING LIMITATION b/: $7,948,000.

Munich Reinsurance Company, U.S. Branch. BUSINESS ADDRESS: 560 Lexington Ave., New York, NY 10022. PHONE: (212) 310-1800. UNDERWRITING LIMITATION b/: $41,278,000.

Swiss Reinsurance Company, U.S. Branch. BUSINESS ADDRESS: 237 Park Avenue, New York, NY 10017. PHONE: (212) 907-8000. UNDERWRITING LIMITATION b/: $38,399,000.

Tokio Marine and Fire Insurance Company, Limited (The), U.S. Branch. BUSINESS ADDRESS: 101 Park Avenue, New York, NY 10178. PHONE: (212) 297-6600. UNDERWRITING LIMITATION b/: $13,495,000.

Zurich Insurance Company, U.S. Branch. BUSINESS ADDRESS: 1400 American Lane, Schaumburg, IL 60196. PHONE: (708) 605-6000. UNDERWRITING LIMITATION b/: $61,232,000.

See Footnotes/Notes at end of Circular

FOOTNOTES

1/ Frontier Insurance Company is required by State law to conduct business in the States of Arkansas, Florida, Iowa, Nevada, North Dakota, Texas and Utah as Frontier Insurance Company DBA Frontier Insurance Company of New York. In Missouri, Frontier Insurance Company is required by State law to conduct business as New York Frontier Insurance Company.

2/ Oceanic Insurance and Surety Company changed its State of Domicile from New Mexico to Illinois, effective December 31, 1992.

3/ Omaha Property and Casualty Company changed its State of Domicile from Delaware to Nebraska, effective November 2, 1992.

4/ U.S. Capital Insurance Company is required by State law to conduct business in the State of California as MultiPlus Insurance Co.

5/ United Capitol Insurance Company is an approved surplus lines carrier in all fifty states. Such approval may indicate that the Company is authorized to write surety in a particular state, even though the Company is not licensed in the State. Questions related to this, may be directed to the appropriate State Insurance Department.

6/ United Pacific Insurance Company changed its State of Domicile from Washington to Pennsylvania, effective date unknown at date of this publication.

NOTES

(a) All Certificates of Authority expire June 30, and are renewable July 1, annually. Companies holding Certificates of Authority as acceptable sureties on Federal bonds are also acceptable as reinsuring companies.

(b) The Underwriting Limitations published herein are on a per bond basis. Treasury requirements do not limit the penal sum (face amount) of bonds which surety companies may provide. However, when the penal sum exceeds a company's Underwriting Limitation, the excess must be protected by co-insurance, reinsurance, or other methods in accordance with Treasury Circular 297, Revised September 1, 1978 (31 CFR Section 223.10, Section 223.11). Treasury refers to a bond of this type as an Excess Risk. When Excess Risks on bonds in favor of the United States are protected by reinsurance, such reinsurance is to be effected by use of a Federal reinsurance form to be filed with the bond or within 45 days thereafter. In protecting such excess

risks, the underwriting limitation in force on the day in which the bond was provided will govern absolutely.

(c) A surety company must be licensed in the State or other area in which it provides a bond, but need not be licensed in the State or other area in which the principal resides or where the contract is to be performed [28 Op. Atty. Gen. 127, Dec. 24, 1909; 31 CFR Section 223.5 (b)]. The term "other area" includes the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands.

License information in this Circular is provided to the Treasury Department by the companies themselves. For updated license information, you may contact the company directly or the applicable State Insurance Department. For further assistance, contact the Surety Bond Branch.

(d) FEDERAL PROCESS AGENTS: Treasury approved surety companies are required to appoint Federal process agents in accord with 31 U.S.C. 9306 and 31 CFR 224 in the following districts: Where the principal resides; where the obligation is to be performed; and in the District of Columbia where the bond is returnable or filed. No process agent is required in the State or other area where the company is incorporated (31 CFR Section 224.2). The name and address of a particular surety's process agent in a particular Federal Judicial District may be obtained from the Clerk of the U.S. District Court in that district. (The appointment documents are on file with the clerks.) (NOTE: A surety company's underwriting agent who furnishes its bonds may or may not be its authorized process agent.)

SERVICE OF PROCESS: Process should be served on the Federal process agent appointed by a surety in a judicial district, except where the appointment of such agent is pending or during the absence of such agent from the district. Only in the event an agent has not been duly appointed, or the appointment is pending, or the agent is absent from the district, should process be served directly on the Clerk of the court pursuant to the provisions of 31 U.S.C. 9306.

(e) Companies holding Certificates of Authority as acceptable reinsuring companies are acceptable only as reinsuring companies on Federal bonds.

(f) Some companies may be approved surplus lines carriers in various states. Such approval may indicate that the company is authorized to write surety in a particular state, even though the company is not licensed in the state. Questions related to this may be directed to the appropriate State Insurance Department.

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federal register

Thursday
July 1, 1993

Part IX

Department of the Treasury

Office of Foreign Assets Control

31 CFR Part 585

Federal Republic of Yugoslavia Sanctions Regulations; Final Rule

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

31 CFR Part 585

Federal Republic of Yugoslavia (Serbia and Montenegro) Sanctions Regulations

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Final rule; amendments.

SUMMARY: This rule amends the Federal Republic of Yugoslavia (Serbia and Montenegro) Sanctions Regulations to implement Executive Order No. 12846 of April 25, 1993, imposing new sanctions on the Federal Republic of Yugoslavia (Serbia and Montenegro) in view of United Nations Security Council Resolution No. 820; expand the general license covering transactions in certain rescheduled debt of entities of the former Yugoslavia; and notify the public of the authorization number from the Office of Management and Budget for information collections in the regulations.

EFFECTIVE DATE: June 29, 1993, except that § 585.201(b) and §§ 585.215 through 585.218 are effective 12:01 a.m. Eastern Daylight Time, April 26, 1993.

FOR FURTHER INFORMATION CONTACT: Steven I. Pinter, Chief of Licensing, tel.: 202/622-2480; or William B. Hoffman, Chief Counsel, tel.: 202/622-2410, Office of Foreign Assets Control, Department of the Treasury, Washington, DC 20220.

SUPPLEMENTARY INFORMATION: On April 25, 1993, the President issued Executive Order 12846, 58 FR 25771 (April 27, 1993) tightening economic sanctions against the unrecognized Federal Republic of Yugoslavia (Serbia and Montenegro) (the "FRY (S&M)"), taking into account the provisions of United Nations Security Council Resolution No. 820 of April 17, 1993. Effective April 26, 1993, the order blocks all property and interests in property of all commercial, industrial, or public utility undertakings or entities organized or located in the FRY (S&M), including property and interests in property of entities (wherever organized or located) owned or controlled by such undertakings or entities, that are or thereafter come within the United States or the possession or control of United States persons. Section 585.201 of the Federal Republic of Yugoslavia (Serbia and Montenegro) Sanctions Regulations ("FRYSR") is amended to implement this provision. Section 1(a) of Executive Order 12846 expressly blocks property subject to U.S. jurisdiction of many entities, both U.S. and foreign, heretofore blocked pursuant to the working presumption of the Office of Foreign Assets Control ("FAC") that all entities organized or located in the FRY (S&M), as well as entities owned or controlled by them, are controlled directly or indirectly by the Government of the FRY (S&M). Regulations, § 585.311. See also, General Notice No. 1 of July 6, 1992, 57 FR 32051 (July 20, 1992).

New § 585.215 implements section 1(c) of Executive Order 12846 to provide that, except as otherwise authorized, conveyances and/or cargo that come within the United States and that are not otherwise subject to blocking, but are suspected of a violation of United Nations Security Council resolutions imposing sanctions against the FRY (S&M), shall be detained pending investigation and, upon a determination by the Secretary of the Treasury or his delegate that a violation has occurred, shall be blocked. New § 585.216 of the Regulations implements section 1(b) of Executive Order 12846 to provide that, except as otherwise authorized, all expenses incident to the blocking and maintenance of property blocked pursuant to §§ 585.201 and 585.215 of the Regulations shall be charged to the owners or operators of such property. Section 585.216 also provides for the discretionary liquidation of property blocked under these sections, with net proceeds placed in a blocked account in the name of the property's owner. E.O. 12846, section 1(b) & (c).

New § 585.217 provides that no vessel registered in the United States or owned or controlled by U.S. persons, other than U.S. naval vessels, may enter the territorial waters of the FRY (S&M) without specific authorization. E.O. 12846, section 1(d). New § 585.218 prohibits, unless specifically authorized pursuant to the statement of licensing policy in new § 585.524, any dealing by a United States person relating to the unauthorized importation from, exportation to, or transshipment through, the United Nations Protected Areas in the Republic of Croatia and those areas of the Republic of Bosnia-Hercegovina under the control of Bosnian Serb forces, and activities promoting such trade. E.O. 12846, section 1(e).

The prohibitions of Executive Order 12846 apply notwithstanding any prior contracts, international agreements, licenses or authorizations, but may be modified by regulation, order or license. New § 585.419 states that Executive Order 12846 does not invalidate existing authorizations and licenses issued pursuant to Executive orders with respect to the FRY (S&M), but makes them subject to termination, suspension or modification by the Office of Foreign Assets Control. E.O. 12846, section 6.

In addition to implementing the provisions of Executive Order 12846, this final rule expands the general license in § 585.509 of the Regulations to include "Qualified Transactions," as defined in the New Financing Agreement of September 20, 1988, in instruments representing rescheduled debt of certain commercial entities in the former Yugoslavia not located or headquartered in Serbia or Montenegro.

Finally, the rule adds the OMB Paperwork Reduction Act authorization number in new § 585.901.

Because the Regulations involve a foreign affairs function, Executive Order 12291 and the provisions of the Administrative Procedure Act, 5 U.S.C. 553, requiring notice of proposed rulemaking, opportunity for public participation, and delay in effective date, are inapplicable. Because no notice of proposed rulemaking is required for this rule, the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, does not apply.

List of Subjects in 31 CFR Part 585

Blocking of assets, Exports, Federal Republic of Yugoslavia (Serbia and Montenegro), Foreign trade, Imports, Shipping, Vessels.

For the reasons set forth in the preamble, 31 CFR part 585 is amended as set forth below:

PART 585—FEDERAL REPUBLIC OF YUGOSLAVIA (SERBIA AND MONTENEGRO) SANCTIONS REGULATIONS

1. The authority citation for part 585 is revised to read as follows:

Authority: 50 U.S.C. 1701 *et seq.*; 50 U.S.C. 1601 *et seq.*; 22 U.S.C. 287c; 49 U.S.C. App. 1514; 3 U.S.C. 301; E.O. 12808, 57 FR 23299 (May 30, 1992); E.O. 12810, 57 FR 24347 (June 9, 1992); E.O. 12831, 58 FR 5253 (January 21, 1993); E.O. 12846, 58 FR 25771 (April 27, 1993).

Subpart B—Prohibitions

2. Section 585.201 is amended by redesignating paragraph (b) as paragraph (c), and by adding new paragraph (b) to read as follows:

§ 585.201 Prohibited transactions involving blocked property; transactions with respect to securities.

* * * * *

(b) Except as otherwise authorized, and notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement

or any contract entered into or any license or permit granted before 12:01 a.m. EDT, April 26, 1993, no property or interest in property of any commercial, industrial, or public utility undertakings or entities organized or located in the Federal Republic of Yugoslavia (Serbia and Montenegro), including, without limitation, the property and all interests in property of entities [wherever organized or located] owned or controlled by such undertakings or entities, that are in the United States, that hereafter come within the United States, or that are or hereafter come within the possession or control of United States persons, including their overseas branches, may be transferred, paid, exported, withdrawn or otherwise dealt in.

* * * * *

3. Section 585.215 is added to read as follows:

§ 585.215 Conveyances and cargo suspected of being in violation of United Nations sanctions; detention; blocking.

(a) Except as otherwise authorized, and notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement or any contract entered into or any license or permit granted before 12:01 a.m. EDT, April 26, 1993, all vessels, freight vehicles, rolling stock, aircraft and cargo that are in or hereafter come within the United States and are not subject to blocking pursuant to § 585.201, but which are suspected of a violation of United Nations Security Council Resolutions No. 713 (1991), 757 (1992), 787 (1992) or 820 (1993):

(1) Shall be detained, pending investigation; and,

(2) Upon a determination by the Director, Office of Foreign Assets Control, that they have been in violation of any of these resolutions, may not be transferred, moved, exported, withdrawn, or otherwise dealt in.

(b) Conveyances and cargoes blocked pursuant to paragraph (a) of this section may be liquidated as provided in § 585.216.

4. Section 585.216 is added to read as follows:

§ 585.216 Expenses of maintaining blocked property; liquidation into blocked account.

(a) Except as otherwise authorized, and notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement or any contract entered into or any license or permit granted before 12:01 a.m. EDT, April 26, 1993, all expenses incident to the blocking and maintenance of property blocked pursuant to § 585.201 or § 585.215(a) shall be charged to the owners or operators of such property, which expenses shall not be met from blocked funds.

(b) Property blocked pursuant to § 585.201 or § 585.215 may, in the discretion of the Director, Office of Foreign Assets Control, be sold or liquidated and the net proceeds shall be placed in a blocked interest-bearing account in the name of the owner of the property.

5. Section 585.217 is added to read as follows:

§ 585.217 Entry into the territorial waters of the FRY (S&M) prohibited.

Except as otherwise authorized by the Director, Office of Foreign Assets Control, pursuant to this part, no vessel registered in the United States or owned or controlled by U.S. persons, other than a United States naval vessel, may enter the territorial waters of the FRY (S&M).

6. Section 585.218 is added to read as follows:

§ 585.218 Trade in United Nations Protected Areas of Croatia and Serb-controlled areas of Bosnia-Hercegovina.

Except as otherwise authorized by the Director, Office of Foreign Assets Control, pursuant to this part, any dealing by a United States person relating to the importation from, exportation to, or transshipment through the United Nations Protected Areas in the Republic of Croatia and those areas of the Republic of Bosnia-Hercegovina under the control of Bosnian Serb forces, or activity of any kind that promotes or is intended to promote such dealing, is prohibited. See § 585.524.

Subpart C—Definitions

7. Paragraph (a) of § 585.301 is revised; the word "and" is removed from the end of paragraph (c); the period is removed from the end of paragraph (d) and a semicolon and the word "and" are added in its place; and paragraph (e) is added, to read as follows:

§ 585.301 Effective date.

* * * * *

(a) With respect to §§ 585.201 (a) & (c), 585.202, and 585.214, 11:59 p.m. EDT, May 30, 1992;

* * * * *

(e) With respect to §§ 585.201(b), 585.215, 585.216, 585.217, and 585.218, 12:01 a.m. EDT, April 26, 1993.

Subpart D—Interpretations

8. Section 585.418 is added to read as follows:

§ 585.418 Vessels of the Federal Republic of Yugoslavia (Serbia and Montenegro).

Any vessel in which a majority or controlling interest is held by a person or entity in, or operating from the FRY (S&M) shall be considered as a vessel of the FRY (S&M) regardless of the flag under which the vessel sails.

9. Section 585.419 is added to read as follows:

§ 585.419 Effect of E.O. 12846 on outstanding licenses and authorizations.

Executive Order 12846 does not affect the provisions of licenses and authorizations issued pursuant to Executive Order 12808, 12810 or 12831 or this part by the Office of Foreign Assets Control and in force as of 12:01 a.m. EDT, April 26, 1993, except as such licenses or authorizations are thereafter terminated, modified or suspended by the Director, Office of Foreign Assets Control.

Subpart E—Licenses, Authorizations, and Statements of Licensing Policy

10. Section 585.509 is amended by substituting the words "Pre-sanctions Obligor" for the words "Original Borrower," wherever they occur in paragraphs (b) and (d)(2)(ii), and the section heading and paragraph (a) are revised to read as follows:

§ 585.509 Trading in certain pre-sanctions obligations of debtors in the Republics of Slovenia, Croatia, Bosnia-Hercegovina, and Macedonia authorized.

(a) All transactions by U.S. persons involving secondary market trading in debt obligations, or portions thereof, as well as "Qualified Transactions" that result in the cancellation of Refinancing Loans, or portions thereof, originally incurred or transferred to banks ("Pre-sanctions Obligors") organized and headquartered in the Republics of Slovenia, Croatia, Bosnia-Hercegovina, and Macedonia, prior to the effective date, and rescheduled pursuant to the "New Financing Agreement" of September 20, 1988 (the "NFA"), are authorized, notwithstanding the joint and several liability undertaken by the National Bank of Yugoslavia and/or of banks located in the FRY (S&M), for repayment of such obligations.

* * * * *

11. Section 585.524 is added to read as follows:

§ 585.524 Humanitarian aid and trade in United Nations Protected Areas of Croatia and Serb-controlled areas of Bosnia-Hercegovina.

(a) Specific licenses may be issued on a case-by-case basis to permit exportation to, or transshipment

through, the United Nations Protected Areas in the Republic of Croatia and those areas of the Republic of Bosnia-Hercegovina under the control of Bosnian Serb forces of essential humanitarian supplies, including medical supplies and foodstuffs, distributed by international humanitarian agencies. Applications for specific licenses shall be made in accordance with § 585.522(c).

(b) Specific licenses may be issued on a case-by-case basis to permit importation from, exportation to, or transshipment through the United Nations Protected Areas in the Republic of Croatia and those areas of the Republic of Bosnia-Hercegovina under the control of Bosnian Serb forces of any other goods, only upon a determination by the Director of the Office of Foreign Assets Control that such activities have been properly authorized by the Government of the Republic of Croatia or the Government of the Republic of Bosnia-Hercegovina, respectively.

Subpart I—Paperwork Reduction Act

12. Section 585.901 is added to read as follows:

§ 585.901 Paperwork Reduction Act notice.

The information collection requirements in §§ 585.503, 585.506, 585.509, 585.510, 585.511, 585.515 through 585.518, 585.520, 585.521, Subpart F, and §§ 585.703 and 585.801 have been approved by the Office of Management and Budget and assigned control number 1505–0143.

Dated: June 21, 1993.

R. Richard Newcomb,

Director, Office of Foreign Assets Control.

Approved: June 25, 1993.

Ronald K. Noble,

Assistant Secretary (Enforcement).

[FR Doc. 93–15678 Filed 6–29–93; 11:18 am]

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federal register

Thursday
July 1, 1993

Part X

Department of Justice

Immigration and Naturalization Service

8 CFR Part 245

Adjustment of Status; Certain Nationals of the People's Republic of China; Interim rule

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

8 CFR Part 245

[INS Number: 1607-93]

RIN 1115-AD33

Adjustment of Status; Certain Nationals of the People's Republic of China

AGENCY: Immigration and Naturalization Service, Justice.

ACTION: Interim rule with request for comments.

SUMMARY: This interim rule implements the Chinese Student Protection Act of 1992 (CSPA), by establishing procedures for certain nationals of the People's Republic of China, their spouses, and their children who have been temporarily residing in the United States, to become lawful permanent residents of this country. It allows them to obtain lawful permanent resident status without applying for an immigrant visa at a United States consulate abroad and waives many of the usual requirements for this benefit. This rule eliminates the possibility of these persons being forced to return to the People's Republic of China, by allowing them to obtain a settled immigration status and permanent safe haven in the United States, with the possibility of becoming United States citizens in the future. All applications for this benefit must be filed by mail with the appropriate Service Center.

DATES: This interim rule is effective on July 1, 1993. Comments must be received on or before August 2, 1993.

ADDRESSES: Please submit written comments, in triplicate, to the Records Systems Division, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, 425 I Street NW., room 5307, Washington, DC 20536. To ensure proper handling, please reference INS number 1607-93 on your correspondence.

FOR FURTHER INFORMATION CONTACT: Rita A. Boie, Senior Immigration Examiner, Adjudications Branch, Immigration and Naturalization Service, 425 I Street NW., room 7223, Washington, DC 20536, telephone (202) 514-5014.

SUPPLEMENTARY INFORMATION:

General Requirements for Lawful Permanent Resident Status

A person who is not a citizen or national of the United States and who is seeking permission to live permanently in this country must establish eligibility for classification as an immigrant under one of several categories provided by the Immigration and Nationality Act (Act). An intending immigrant may meet this requirement by showing that a petition has been approved for his or her classification as an immigrant based upon intended employment in the United States or a close family relationship to a United States citizen or lawful permanent resident.

Due to the high demand for permanent resident status and the need for an orderly immigration process, the Act limits the number of immigrant visas which may be issued each year. The Act places limitations or quotas on the number of immigrant visas which may be issued under most classifications, and on the number of immigrant visas which may be issued to natives of an individual foreign state. A waiting list is established for those classifications and countries where the demand exceeds the number of visas legally available. When an individual's priority date (place on the waiting list) has been reached, a visa number becomes available for him or her. The person may only then be issued an immigrant visa.

Immigrant visas are issued only at United States consulates or embassies abroad. In addition to reviewing an applicant's eligibility for classification as an immigrant and verifying the availability of a visa number, consular officials determine whether the individual is admissible to the United States. A person may be prohibited from entering the United States for a variety of reasons. Grounds of exclusion, as set forth in section 212(a) of the Act, include an inability to obtain employment or otherwise provide for his or her financial support, convictions for certain crimes, and illicit trafficking in controlled substances.

After an individual has been issued an immigrant visa, he or she may travel to the United States and seek admission for lawful permanent residence. A lawful permanent resident may live and work legally in the United States. After meeting certain requirements, a lawful permanent resident may apply to become a naturalized citizen of the United States.

Some intending immigrants, however, are already in the United States in temporary nonimmigrant status. If these persons meet certain criteria, they may be allowed to adjust their immigration status to become lawful permanent residents without leaving the United States. This process is known as adjustment of status. Eligibility requirements for adjustment of status under section 245 of the Act are more stringent than requirements for immigrant visa issuance abroad, since adjustment is an exception to the normal process. The more stringent adjustment requirements also serve to discourage persons from obtaining temporary nonimmigrant visas in order to bypass the immigrant visa processing requirements.

In addition to having an immigrant visa number immediately available and establishing eligibility for classification as an immigrant, adjustment of status applicants usually must prove that they entered the United States after having been inspected and admitted or paroled by an immigration officer. They must also show that they have complied with the requirements of their temporary nonimmigrant status and have not been employed in the United States without authorization.

Benefits of the CSPA

Under the terms of Executive Order (E.O.) 12711 of April 11, 1990, certain nationals of the People's Republic of China (PRC) and their dependents may be granted a temporary deferral of enforcement of their departure from the United States and other temporary benefits through January 1, 1994. The Chinese Student Protection Act of 1992 (CSPA), Public Law 102-404, dated October 9, 1992, allows certain persons covered by E.O. 12711 to adjust status to that of lawful permanent residents of the United States.

The CSPA provides eligible applicants with an automatic immigrant classification under the third employment-based preference category, even though petitions may not have been filed and they may not meet the usual requirements for skilled worker classification under section 203(b)(3)(A)(i) of the Act. It also allows these persons to apply for adjustment of status, regardless of whether their priority dates are current and visa numbers are available. The CSPA totally exempts eligible applicants from the per-country immigrant visa limitation of section 202(a)(2) of the Act, and their adjustment of status applications may be approved without regard to this limitation. However, an application for CSPA adjustment of status may not be approved until a visa number becomes available for the applicant under the worldwide allocation of immigrant visa numbers for employment-based aliens under section 203(b)(3)(A)(i) of the Act. The CSPA also exempts applicants who were or are nonimmigrant exchange visitors under section 101(a)(15)(J) of the Act from compliance with the two-

year home country residence requirement of section 212(e) of the Act.

The CSPA further exempts eligible applicants from certain grounds of exclusion. The CSPA provides that qualified applicants may not be excluded for failure to obtain labor certifications, failure to meet certain requirements applicable to foreign-trained physicians, or for violations of documentary requirements relating to entry as an immigrant.

The CSPA also allows most other exclusion grounds to be waived at the discretion of the Attorney General for humanitarian purposes, for purposes of assuring family unity, or if otherwise in the public interest. Grounds of exclusion which cannot be waived are those involving trafficking in controlled substances; security and related grounds such as espionage, terrorist activities, and foreign policy considerations; and participation in Nazi persecutions or in genocide.

The CSPA also allows eligible applicants to adjust status without regard to the provisions of section 245(c) of the Act. This exemption allows CSPA applicants to adjust status even though they may have entered the United States as crewmen, accepted unauthorized employment, failed to maintain lawful nonimmigrant status, been admitted to the United States in transit without visa status under section 212(d)(4)(C) of the Act, or been admitted to the United States as nonimmigrant visitors without visas under section 212(1) or 217 of the Act.

Basic CSPA Eligibility Requirements

In order to be eligible for benefits under the CSPA, an applicant must be a national of the PRC or a dependent of a national of the PRC as described in section 1 of E.O. 12711; must have resided continuously in the United States since April 11, 1990 (except for brief, casual, and innocent absences); and may not have spent more than 90 days in the PRC after April 11, 1990, and before October 9, 1992. CSPA adjustment applicants must also meet all requirements for adjustment of status under section 245 of the Act, unless such requirements have been waived.

Eligibility under Section 1 of Executive Order 12711

Section 1 of E.O. 12711 provides benefits to nationals of the PRC and their dependents who were in the United States at any time between June 5, 1989, and April 11, 1990, inclusive. Persons who have been granted Deferred Enforced Departure (DED) and/or employment authorization benefits under E.O. 12711 have already established to the Immigration and Naturalization Service (Service) that they meet the requirements of section 1 of E.O. 12711. Persons who have been granted the irrevocable waiver of the two-year home country residency requirement under E.O. 12711 which may be exercised until January 1, 1994, may also have already established to the Service that they meet the requirements of section 1 of E.O. 12711. However, a person who did not initially arrive in the United States until after April 11, 1990, may be found not to meet the requirements of section 1 of E.O. 12711, regardless of the Service's decision to grant him or her a derivative waiver of the two-year home country residency requirement based upon his or her spousal or parental relationship to a principal alien who qualifies for benefits under E.O. 12711. Applicants should note that, because the CSPA and E.O. 12711 have distinct eligibility requirements, a person may be found to be ineligible for CSPA benefits even though that person's E.O. 12711 benefits may have been correctly granted and have not been revoked or terminated. If the Service determines that a person who was granted E.O. 12711 benefits was not, in fact, eligible for these benefits, the Service may deny that person's request for CSPA adjustment without having first revoked or terminated that person's E.O. 12711 benefits.

The Service has previously determined that a brief, casual, and innocent departure from the United States between June 5, 1989, and April 11, 1990, inclusive, would not preclude an individual from coverage under section 1 of E.O. 12711 and eligibility for E.O. 12711 benefits. This same interpretation of the E.O. 12711 requirements will be applied when determining whether a CSPA applicant is a person described in section 1 of E.O. 12711.

The CSPA does not require applicants to have previously applied for benefits under E.O. 12711. Therefore, PRC nationals and their dependents who meet the requirements of section 1 of E.O. 12711 but have not applied for E.O. 12711 benefits may be eligible for CSPA adjustment of status.

National of the PRC

The term "national" is defined under section 101(a)(21) of the Act as a person owing permanent allegiance to a state. In most cases, a citizen of the PRC who entered the United States using a passport issued by the PRC would be considered a national of the PRC. A citizen of the PRC who has taken up temporary or permanent residence in a third country without becoming a citizen of that country would also ordinarily be considered a national of the PRC. A citizen of the PRC who traveled to the United States using a Certificate of Identity or other non-national travel document issued by a third country may also be considered a PRC national.

A citizen of the PRC who is a dual national of the PRC and of one or more other countries would not necessarily be precluded from satisfying the PRC nationality requirement under the CSPA. However, the Service has held that an alien is bound by the nationality claimed or established at the time of entry for the duration of his or her stay in the United States. Thus, a dual national CSPA principal applicant must have claimed PRC nationality at the time of his or her last entry into the United States on or before April 11, 1990.

Persons who entered the United States as citizens (and not merely residents) of Hong Kong or of Taiwan are not considered nationals of the PRC for the purpose of E.O. 12711 and will not be considered PRC nationals for the purpose of the CSPA. Hong Kong remains a colony of the United Kingdom of Great Britain and Northern Ireland at this time, and is not under the sovereignty of the PRC. Similarly, although the United States government recognizes the government of the PRC to be the government of all of China, section 3303(b)(6) of Title 22 of the United States Code provides that Taiwan is to be considered a separate independent country for purposes of United States immigration law.

Dependents of PRC Nationals

The CSPA does not limit the age, marital status, or sex of persons who may be considered as CSPA principal applicants. Therefore, a spouse or child who is a national of the PRC in his or her own right will be considered a principal applicant for the purpose of establishing eligibility for CSPA adjustment of status.

Certain non-PRC family members who satisfy the requirements of section 1 of E.O. 12711 and of the CSPA may also be eligible for CSPA benefits. In accordance with the general requirements for derivative immigrant classification, as set forth in section 203(d) of the Act, a non-PRC family member who is the unmarried child under 21 years of age or the spouse of an eligible PRC national may apply for CSPA adjustment of status. The non-PRC family member must show that he or she was in the United States at some time between June 5, 1989, and April

11, 1990, and that the qualifying relationship to the PRC principal existed as of April 11, 1990.

A non-PRC applicant is not eligible for CSPA adjustment of status if the qualifying relationship has been terminated or if it terminates before the non-PRC family member's application for CSPA adjustment of status has been approved. However, given that the Service has previously determined that E.O. 12711 benefits should not be terminated merely because a non-PRC son or daughter of a qualified PRC national reached the age of 21 or married, an adult or married non-PRC son or daughter who did not reach 21 years of age and did not marry until after April 11, 1990, may be eligible for CSPA adjustment of status.

A non-PRC family member's application for CSPA adjustment of status may not be granted before the PRC principal's CSPA adjustment of status has been approved. A non-PRC family member's application for CSPA adjustment of status must be denied if the PRC principal applicant is found to be ineligible for CSPA adjustment of status.

Family members unable to qualify for CSPA adjustment of status may be eligible for lawful permanent resident status under other provisions of the Act. Those family members whose spousal or parental relationship was established before the principal CSPA alien's application for adjustment of status is approved may be eligible for derivative immigrant status as employment-based preference immigrants accompanying or following to join the CSPA principal. A child born of a qualifying marriage which existed at the time of the principal CSPA applicant's adjustment of status will be considered to have been acquired prior to the principal applicant's adjustment of status, and may also be eligible for accompanying or following to join derivative employment-based preference immigrant status. A qualified spouse or unmarried child who is under 21 years of age at the time he or she is issued an immigrant visa or granted adjustment of status may be considered as following to join the principal CSPA alien regardless of the amount of time which has elapsed since the CSPA principal's status was adjusted. Such family members who are accompanying or following to join a principal CSPA applicant may derive the principal applicant's employment-based third preference category and may be accorded the principal's priority date. These family members must satisfy the usual requirements for adjustment of status or immigrant visa issuance, including the requirement that an immigrant visa number be immediately available when the immigrant visa is issued or the application for adjustment of status is filed. When the family member's visa number becomes current, the family member may apply for an immigrant visa abroad or, if he or she meets the requirements of section 245 of the Act, for adjustment of status in the United States.

After the CSPA principal's status is adjusted to that of a lawful permanent resident, the principal also has the option of filing a visa petition to accord his or her spouse, children, and unmarried adult sons and daughters immigrant classification under section 203(a)(2) of the Act. In this case, the priority date would be based upon the date the CSPA principal filed the visa petition for the family member. The spousal or parental relationship may have been established any time before the visa petition was filed.

A family member who is not immediately eligible for CSPA adjustment of status may apply for any other benefit for which he or she may be eligible under the Act or by regulation. Any alien in the United States, including a family member of a CSPA applicant, who is unable or unwilling to return to his or her country of nationality because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion, and believes that he or she meets the definition of "refugee" contained in section 101(a)(42) of the Act, may request asylum. An application for asylum may be made by filing Form I–589, Request for Asylum in the United States.

Family members who are unable to maintain lawful nonimmigrant status in the United States and are not immediately eligible to apply for adjustment of status also have the option of requesting voluntary departure. Service regulations at 8 CFR 242.5 allow the request for voluntary departure to be made to the district director having jurisdiction over the person's place of residence. No application form or fee is required. Family members who have been granted voluntary departure may request employment authorization by filing Form I–765, Application for Employment Authorization.

"Resided Continuously" and "Brief, Casual, and Innocent Absences"

Under the terms of the CSPA, eligible applicants must have resided continuously in the United States since April 11, 1990. They may, however, have had brief, casual, and innocent absences from the United States during this time. Since CSPA applicants must also meet the requirements of section 1 of E.O. 12711, CSPA applicants must also have been in the United States at some time between June 5, 1989, and April 11, 1990, inclusive, or show that they would have been in this country if they had not had a brief, casual, and innocent departure from the United States during this time.

Section 101(a)(33) of the Act defines the term "residence" as a person's "principal, actual dwelling place in fact, without regard to intent." Therefore, in order to satisfy the continuous residence requirement of the CSPA, an applicant must show that, since April 11, 1990, his or her principal actual dwelling place in fact, regardless of intent, was in the United States. The maintenance of assets in this country without physical presence is not sufficient to satisfy the continuous residence requirement, although continuous physical presence is not required. A CSPA applicant who has had his or her principal actual dwelling place in fact in the United States and has had only brief, casual, and innocent absences from the United States since April 11, 1990, may be considered to have resided continuously in this country.

The determination as to whether an absence may be characterized as "brief, casual, and innocent" may be made only after an evaluation not only of the length of the absence from the United States, but also of the purpose for which the trip was made and any extenuating circumstances which may have caused the person to be unable to promptly return to his or her residence in the United States. For purposes of determining eligibility under E.O. 12711 and the CSPA, "brief, casual, and innocent" has been, and will continue to be, interpreted liberally. Brief, casual, and innocent departures may include foreign visits by students during school vacations, trips outside the country necessitated by family emergencies, international conferences, and other academically-related activities. A temporary absence of this nature should not usually have exceeded the length of a normal summer vacation for students. Prolonged absences that are longer that five months are not necessarily deemed brief or casual. However, circumstances requiring longer absences will be given consideration. In general, absences due to temporary assignments abroad for a United States employer or for academic research or training approved by the applicant's United States educational institution will be looked upon as being brief, casual, and innocent and,

therefore, not interruptive of continuous residence in the United States.

Physical Presence in the PRC

The CSPA limits the time which an applicant may have spent in the PRC between April 11, 1990, and October 9, 1992, to a total of 90 days. The CSPA does not restrict the number of times an eligible applicant may have traveled to the PRC. Therefore, the 90-day restriction will not apply unless the time an applicant has been physically present in the PRC totals 90 or more days, regardless of the number of times the applicant has traveled to the PRC during the restricted period. The CSPA also does not restrict the number of trips an applicant may have made to the PRC before April 12, 1990, and/or on or after October 9, 1992. Time spent in the PRC before or on April 11, 1990, and/or on or after October 9, 1992, will not be taken into account when determining the amount of time a CSPA applicant has physically spent in the PRC.

Since this restriction is statutorily imposed, the Service has no discretionary authority to waive compliance with the 90-day aggregate limit on physical presence in the PRC, regardless of the reasons the applicant may have been forced to remain in the PRC.

Eligibility for Adjustment of Status

An eligible CSPA applicant is considered to be automatically eligible for classification as an immigrant under the third employment-based preference category, even though no petition has actually been filed and the applicant may not be a skilled worker as defined under section 203(b)(3)(A)(i) of the Act. Since no petition is filed, the CSPA applicant will be assigned a priority date based upon the date the application for adjustment of status is properly filed with the appropriate Service office. CSPA applicants are exempted from the per-country immigrant visa limitations of section 202(a)(2) of the Act, and may file applications for adjustment of status, regardless of whether their priority dates are current and visa numbers are immediately available at the time of filing. However, CSPA applicants are not exempted from the worldwide annual numerical limit on employment-based immigrants. Therefore, a CSPA adjustment application may not be approved until the applicant's priority date is current (place on the waiting list has been reached) and a visa number is available for the applicant under the worldwide 203(b)(3)(A)(i) preference category, as shown in the Department of State Visa Bulletin. Applications which have been filed but cannot be approved solely because no visa number is available will be retained by the Service until such time as the priority date is reached and the number becomes available. The CSPA also exempts applicants who were or are nonimmigrant exchange visitors under section 101(a)(15)(J) of the Act from compliance with the two-year home country residency requirement of section 212(e) of the Act.

The CSPA also provides that qualified applicants may not be excluded for failure to obtain labor certifications or failure to meet certain requirements applicable to foreign-trained physicians under section 212(a)(5) of the Act; or for violations of documentary requirements relating to entry as an immigrant under section 212(a)(7)(A) of the Act. However, the CSPA does not automatically exempt CSPA applicants from other grounds of exclusion under section 212(a) of the Act. Therefore, all CSPA applicants must show that they are not excludable from the United States under all applicable grounds of exclusion under section 212(a) of the Act, or must show that an individual waiver has been approved for them. The CSPA allows most other grounds of excludability to be waived individually for CSPA applicants at the discretion of the Attorney General for humanitarian purposes, for purposes of assuring family unity, or if otherwise in the public interest. Grounds of excludability which cannot be waived are those involving trafficking in controlled substances under section 212(a)(2)(C) of the Act; security and related grounds such as espionage under section 212(a)(3)(A) of the Act; terrorist activities under section 212(a)(3)(B) of the Act; foreign policy considerations under section 212(a)(3)(C) of the Act; and participation in Nazi persecutions or in genocide under section 212(a)(3)(E) of the Act. A CSPA applicant may request consideration for one or more waivers by filing an application for the waiver concurrently with his or her adjustment of status application. The adjustment of status may not be granted unless the waiver has first been approved.

The CSPA also allows eligible applicants to adjust status without regard to the provisions of section 245(a) of the Act. This exemption allows CSPA applicants to adjust status even though they entered the United States as crewmen, accepted unauthorized employment, failed to maintain lawful nonimmigrant status, were admitted to the United States in transit without visa status under section 212(d)(4)(C) of the Act, or were admitted to the United States as nonimmigrant visitors without visas under section 212(1) or 217 of the Act.

No other requirements of section 245 of the Act have been waived by the CSPA. Therefore, CSPA applicants must meet the requirements of section 245(a) of the Act, which requires adjustment applicants to establish that they were inspected and admitted or paroled into the United States by an immigration officer. Persons who entered the United States without inspection are not eligible for CSPA benefits. CSPA applicants are also subject to the requirements of section 245(d) of the Act, which prohibits the adjustment of status of an alien lawfully admitted to the United States for permanent residence on a conditional basis under section 216 of the Act. CSPA applicants are also subject to the restrictions on the adjustment of status of an alien who was admitted to the United States as a fiance(e) or the child of a fiance(e) under section 101(a)(15)(K) of the Act, as provided in section 245(d) of the Act. Section 245(d) of the Act allows these persons to adjust status to that of an alien lawfully admitted to the United States only on a conditional basis under section 216 of the Act as a result of the marriage of the fiance(e) to the United States citizen who filed the fiance(e) petition upon which the alien's nonimmigrant status is based.

Application Period

The CSPA specifies that the application period for these benefits begins July 1, 1993. Applications received prior to the beginning of the application period will be deemed by the Service to have been filed on July 1, 1993, and will be assigned a July 1, 1993 priority date. In order to be able to approve as many applications as possible during Fiscal Year 1993, when excess visa numbers are expected to be available within the worldwide section 203(b)(3)(A)(i) quota, the Service may initiate record checks and begin clerical processing of CSPA applications received prior to July 1, 1993.

Pursuant to the CSPA deactivation clause, if the President of the United States determines and certifies to Congress before July 1, 1993, that conditions in the PRC permit persons covered by the CSPA to safely return to the PRC, no applications for lawful permanent resident status under the CSPA will be processed or granted. If this was to happen, Chinese nationals who have been granted DED under E.O. 12711 would be expected to establish eligibility for other immigration classifications or to depart the United States by January 1, 1994.

If the President does not make this certification before July 1, 1993, the Service will grant lawful permanent residence to qualified CSPA applicants. The CSPA will remain in force regardless of changes taking place in the PRC on or after July 1, 1993.

The CSPA application period will continue through June 30, 1994. All CSPA applications must be properly filed with the Service before the end of the business day on June 30, 1994, although the Service may complete its processing of CSPA applications after that date.

Application Forms and Supporting Documents

Applicants should refer to the instructions provided with the required application forms. Applicants for CSPA adjustment of status benefits must file a Form I–485, "Application to Register Permanent Residence or Adjust Status," accompanied by the required application fee and supporting documents. PRC national CSPA applicants should complete Part 2 of that form (Application Type) by checking box "h—other" and writing "CSPA—Principal" next to that block. Non-PRC national CSPA applicants should complete Part 2 of that form (Application Type) by checking box "h—other" and writing "CSPA—Qualified Family Member" next to that block.

Each application filed by a PRC national CSPA applicant must be accompanied by the initial evidence required by Form I–485: (1) A birth certificate or other record of birth; (2) two "ADIT-style" photos as described in the Form I–485 instructions; (3) one complete set of fingerprints on Form FD–258, "Applicant Card," if the applicant is between 14 and 75 years old; (4) a completed Form G–325A, "Biographic Information Sheet," if the applicant is between 14 and 79 years old; (5) an original medical examination report on Form I–693, "Medical Examination of Aliens Seeking Adjustment of Status," completed by a physician authorized by the local Service office; (6) a copy of the applicant's Form I–94, "Arrival-Departure Record" or other evidence of inspection and admission or parole into the United States; and (7) an original letter of employment showing the applicant is employed in a job which is not temporary, a completed Form I–134, "Affidavit of Support," or other evidence showing that the applicant is not likely to become a public charge in the United States.

Each CSPA applicant must also submit evidence of eligibility for the adjustment of status benefits of the CSPA: (1) A photocopy of all pages of the applicant's most recent passport or an explanation of why the applicant does not have a passport; (2) an attachment on a plain piece of paper showing the date of the applicant's last arrival in the United States before or on April 11, 1990, the date of each departure the applicant made from the United States since that arrival, the reason for each departure, and the date of each return to the United States (if the applicant did not depart the United States after the initial date of arrival, the applicant should write "I was in the United States on April 11, 1990, and I have not departed the United States since April 11, 1990"); (3) an attachment on a plain piece of paper showing the date the applicant arrived in the PRC, the date the applicant left the PRC for each trip the applicant made to the PRC between April 11, 1990, and October 9, 1992 (if the applicant did not travel to the PRC, the applicant should write "I was not in the People's Republic of China between April 11, 1990, and October 9, 1992"); (4) a copy of evidence showing that the applicant was found eligible for benefits under E.O. 12711, such as deferred enforced departure (DED), employment authorization, and/or waiver of the two-year home country residence requirement, if the applicant previously applied for benefits under E.O. 12711; and (5) evidence of a derivative relationship to an eligible PRC national, such as a birth or marriage certificate, if the applicant is a non-PRC family member. Further information concerning evidence which may be provided to establish a derivative relationship may be found in the instructions to Form I–485, under "Evidence of eligibility * * * Based on you being the spouse or child of another adjustment applicant or person granted permanent residence based on issuance of an immigrant visa."

Secondary Evidence

If any required document is unavailable, church or school records, or other secondary evidence pertinent to the facts in issue, may be submitted. If such documents are unavailable, affidavits may be submitted. The applicant may submit as many types of secondary evidence as necessary to establish the birth, marriage, or other event.

In view of the difficulties that some CSPA applicants may encounter when attempting to obtain documents from the PRC, the Service will waive the requirement that secondary evidence of birth or marriage in the PRC be accompanied by documentary evidence that the primary evidence is unavailable.

Preferred secondary evidence concerning admission would consist of United States government-issued documents or documents which have been stamped by a United States immigration officer showing the applicant's lawful admission to the United States, such as Form I–20A–B/I–20ID, "Certificate of Eligibility of Nonimmigrant (F–1) Student Status—For Academic and Language Students," Form I–20M–N, "Certificate of Eligibility for Nonimmigrant (M–1) Student Status—For Vocational Students," or Form IAP–66, "Certificate of Eligibility for Exchange Visitor Status."

Service Requests for Additional Evidence

The Service will evaluate all evidence submitted for credibility and authenticity. The Service may also, at the discretion of the Service Center Director or District Director, choose to request additional evidence that the applicant meets any of the requirements for CSPA adjustment of status. For example, the Service may, at the discretion of the Service Center Director or District Director, choose to request additional evidence of the applicant's continuous residence in the United States since April 11, 1990. Copies of school, employment or similar records which show that the applicant was in the United States during the required time period may be submitted in response to requests for additional evidence of continuous residence.

Fee

CSPA adjustment of status applications must be submitted with the fee required by Form I–485.

Filing

All applications and attachments must be submitted by mail to the Service Center having jurisdiction over the applicant's place of residence.

If the applicant lives in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia, Virgin Islands, or West Virginia, the CSPA adjustment application must be mailed to: USINS Eastern Service Center, 75 Lower Welden Street, St. Albans, VT 05479–0001.

If the applicant lives in Arizona, California, Guam, Hawaii, or Nevada, the CSPA adjustment application must be mailed to: USINS Western Service

Center, P.O. Box 10485, Laguna Niguel, CA 92607–0485.

If the applicant lives in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, or Texas, the CSPA adjustment application must be mailed to: USINS Southern Service Center, P.O. Box 152122 Department A, Irving, TX 75015–2122.

If the applicant lives elsewhere in the United States, the CSPA adjustment application must be mailed to: USINS Northern Service Center, P.O. 82521, Lincoln, NE 68501–2521.

Applicants will receive a filing receipt from the Service Center. The receipt may instruct the applicant to bring the receipt and photo identification to his or her local Service office where his or her signature and fingerprint will be recorded on Form I–89 for processing for an Alien Registration Receipt Card, Form I–551. Failure to promptly appear at the local Service office for processing may delay action on the application. Applicants will be notified by mail of the action taken on their applications.

Interview

If the application is adjudicated without interview, a notice of the decision will be mailed to the applicant. If an interview is required, the application will be forwarded to the local immigration office having jurisdiction over the applicant's place of residence. The applicant will be notified of the date and time to appear for the required interview. The decision whether to require an interview is solely within the discretion of the Service. If an applicant fails to appear for a required interview without good cause, the application will not be approved and may be denied.

Employment Authorization

An unexpired authorization to accept employment under the provisions of E.O. 12711 will not be invalidated by the filing of an application for adjustment of status. Any applicant for adjustment of status who wishes to obtain initial or continued permission to accept employment during the period the adjustment of status application is pending may file Form I–765, Application for Employment Authorization. After a CSPA adjustment application has been granted, a lawful permanent resident who adjusted under the CSPA may present his or her Alien Registration Receipt Card, Form I–551, as evidence that he or she is authorized to accept employment in the United States.

Travel Outside the United States

If an applicant plans to leave the United States to go to any other country, including Canada or Mexico, before a decision is made on his or her CSPA adjustment application, the applicant should contact his or her local Service office. If an applicant leaves the United States without advance written permission, action on his or her CSPA adjustment application may be terminated and the application may be denied. An applicant may also experience difficulty when returning to the United States if he or she does not have written permission to reenter. After a CSPA adjustment application has been granted, a lawful permanent resident who adjusted under the CSPA may travel outside the United States and reenter using his or her Alien Registration Receipt Card, Form I–551, provided he or she has not been absent from the United States for more than one year.

Alien Registration Receipt Cards for Approved CSPA Applicants

After processing is completed, a notice of the decision will be mailed to the CSPA applicant. Applicants should keep this notice for their records. If the application has been approved, an alien registration receipt card will be mailed to the applicant within several months. If an approved applicant needs temporary evidence of lawful permanent resident status, the applicant may present the original approval notice and his or her passport or other photo identification at his or her local Service office. The local Service office will issue temporary evidence of lawful permanent resident status after verifying the approval of the CSPA adjustment of status application.

Dissemination of Information

The CSPA instructs that, if the President of the United States has not certified to the United States Congress before July 1, 1993, that conditions in the PRC permit aliens to return safely to that country, the Attorney General shall, subject to the availability of appropriations, immediately broadly disseminate information concerning the CSPA to eligible aliens. The Service intends to take measures to ensure that eligible aliens are aware of the potential benefits of the CSPA by contacting various organizations that may have contact with them and by providing information to the media. The CSPA further directs the Attorney General, to the extent practicable, to provide notice of these benefits to the last known mailing address of each such alien.

However, a potential applicant should not delay filing an application for CSPA adjustment merely because he or she has not received a notice from the Service.

The Service's implementation of this rule as an interim rule, with provision for post-promulgation public comment, is based upon the "good cause" exceptions found at 5 U.S.C. 553(b)(3)(B), (d)(3); see *Animal Legal Defense Fund* v. *Quigg*, 932 F.2d 920 (Fed Cir. 1991). The reasons and necessity for immediate implementation of this interim rule are as follows:

Early implementation will allow PRC nationals and their spouses and children to obtain the additional benefits available to applicants for adjustment of status under the CSPA as of the beginning of the statutorily established application period on July 1, 1993. Furthermore, early implementation will allow the Service to approve a significant number of CSPA adjustment of status applications during Fiscal Year 1993, when visa numbers are expected to be available. Visa numbers may regress during Fiscal Year 1994, which would force the Service to delay approval of CSPA adjustment of status applications and delay the date when these persons would become lawful permanent residents of the United States.

In accordance with 5 U.S.C. 605(b), the Commissioner of the Immigration and Naturalization Service certifies that this rule does not have a significant adverse economic impact on a substantial number of small entities. This rule is not a major rule within the meaning of section 1(b) of Executive Order 12291, nor does this rule have Federalism implications warranting the preparation of a Federalism Assessment in accordance with Executive Order 12612.

The information collection requirements contained in this rule have been cleared by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act.

List of Subjects in 8 CFR Part 245

Aliens, Immigration, Reporting and recordkeeping requirments.

Accordingly, part 245 of chapter I of title 8 of the Code of Federal Regulations is amended as follows:

PART 245—ADJUSTMENT OF STATUS TO THAT OF PERSON ADMITTED FOR PERMANENT RESIDENCE

1. The authority citation for part 245 continues to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1182, 1255, and 8 CFR part 2.

§ 245.2 **[Amended]**

2. In § 245.2, paragraph (a) is amended in the first sentence by adding the phrase "unless otherwise instructed in 8 CFR 245" immediately after the phrase "place of residence".

3. A new § 245.9 is added to read as follows:

§ 245.9 Adjustment of Status of Certain Nationals of the People's Republic of China under Public Law 102–404.

(a) *Principal applicant status.* All nationals of the People's Republic of China who qualify under the provisions of paragraph (b) of this section may apply for adjustment of status as principals in their own right, regardless of age or marital status. Nationals of other countries who meet the requirements of paragraphs (b) and (c) of this section may apply for adjustment of status as qualified family members.

(b) *Aliens eligible to apply for adjustment.* An alien is eligible to apply for adjustment of status under the provisions of Public Law 102–404, if the alien:

(1) Is a national of the People's Republic of China or a qualified family member of an eligible national of the People's Republic of China;

(2) Was in the United States at some time between June 5, 1989, and April 11, 1990, inclusive, or would have been in the United States during this time period except for a brief, casual, and innocent departure from this country;

(3) Has resided continuously in the United States since April 11, 1990, except for brief, casual, and innocent absences;

(4) Was not physically present in the People's Republic of China for more than a cumulative total of 90 days between April 11, 1990, and October 9, 1992;

(5) Is admissible to the United States as an immigrant, unless the basis for excludability has been waived;

(6) Establishes eligibility for adjustment of status under all provisions of section 245 of the Act, unless the basis for ineligibility has been waived; and

(7) Properly files an application for adjustment of status under section 245 of the Act.

(c) *Qualified family member who is not a national of the People's Republic of China.* A qualified family member within the meaning of this section includes the spouse, child, son, or daughter of a national of the People's Republic of China who is eligible for benefits under the provisions of paragraph (b) of this section, provided that:

(1) He or she qualified as the spouse or child (as defined in section 101(b)(1) of the Act) of an eligible national of the People's Republic of China as of April 11, 1990; and

(2) The qualifying relationship continues to exist, or the family member is a son or daughter of an eligible national of the People's Republic of China and the family member was unmarried and under the age of 21 on April 11, 1990.

(d) *Waivers of excludability under section 212(a).* An applicant for the benefits of the adjustment of status provisions of Public Law 102–404 automatically exempted from compliance with the requirements of section 212(a)(5) and 212(a)(7)(A) of the Act. A Public Law 102–404 applicant may also apply for one or more waivers of excludability under section 212(a) of the Act, except for excludability under section 212(a)(2)(C), 212(a)(3)(A), 212(a)(3)(B), 212(a)(3)(C) or 212(a)(3)(E) of the Act.

(e) *Waiver of the two-year foreign residence requirement of section 212(e).* An applicant for the benefits of the adjustment of status provisions of Public Law 102–404 is automatically exempted from compliance with the two-year foreign residence requirement of section 212(e) of the Act.

(f) *Waiver of section 245(c) of the Act.* Public Law 102–404 provides that the provisions of section 245(c) of the Act shall not apply to persons applying for the adjustment of status benefits of Public Law 102–404.

(g) *Application.* Each applicant must file an application for adjustment of status on Form I–485, Application to Register Permanent Residence or Adjust Status, accompanied by the prescribed fee, and the supporting documents specified on the instructions to Form I–485 and described in § 245.2. Secondary evidence may be submitted if the applicant is unable to obtain the required primary evidence. Applicants who are nationals of the People's Republic of China should complete Part 2 of Form I–485 by checking box "h—other" and writing "CSPA—Principal" next to that block. Applicants who are not nationals of the People's Republic of China should complete Part 2 of Form I–485 by checking box "h—other" and writing "CSPA—Qualified Family Member" next to that block. Each applicant for the benefits of Public Law 102–404 must also submit evidence of eligibility for the adjustment of status benefits of Public Law 102–404:

(1) A photocopy of all pages of the applicant's most recent passport or an explanation of why the applicant does not have a passport;

(2) An attachment on a plain piece of paper showing:

(i) The date of the applicant's last arrival in the United States before or on April 11, 1990;

(ii) The date of each departure the applicant made from the United States since that arrival (if the applicant did not depart the United States after the initial date of arrival, the applicant should write "I was in the United States on April 11, 1990, and I have not departed the United States since April 11, 1990");

(iii) The reason for each departure; and

(iv) The date of each return to the United States.

(3) An attachment on a plain piece of paper showing:

(i) The date the applicant arrived in the People's Republic of China; and

(ii) The date the applicant left the People's Republic of China for each trip the applicant made to the People's Republic of China between April 11, 1990, and October 9, 1992 (if the applicant did not travel to the People's Republic of China, the applicant should write "I was not in the People's Republic of China between April 11, 1990, and October 9, 1992");

(4) A copy of evidence showing that the applicant was found eligible for benefits under E.O. 12711, such as deferred enforced departure (DED), employment authorization, and/or waiver of the two-year foreign residence requirement, if the applicant previously applied for benefits under E.O. 12711; and

(5) Primary or secondary evidence of a qualifying family relationship to an eligible national of the People's Republic of China, such as a birth or marriage certificate, if the applicant is a qualified family member who is not a national of the People's Republic of China.

(h) *Secondary evidence.* If any required primary evidence is unavailable, church or school records, or other secondary evidence pertinent to the facts in issue, may be submitted. If such documents are unavailable, affidavits may be submitted. The applicant may submit as many types of secondary evidence as necessary to establish the birth, marriage, or other event. Documentary evidence establishing that primary evidence is unavailable need not accompany secondary evidence of birth or marriage in the People's Republic of China.

(i) *Filing.* The application period begins on July 1, 1993. To benefit from the provisions of Public Law 102–404

(the Chinese Student Protection Act of 1992), an alien must properly file an application for adjustment of status under section 245 of the Act on or before June 30, 1994. All applications for the benefits of Public Law 102–404 must be submitted by mail to the Service Center having jurisdiction over the applicant's place of residence in the United States. Pursuant to the deactivation clause of Public Law 102–404, if the President of the United States determines and certifies to Congress before July 1, 1993, that conditions in the People's Republic of China permit persons covered by Public Law 102–404 to safely return to the People's Republic of China, no applications for lawful permanent resident status under Public Law 102–404 will be processed or granted.

(j) *Immigrant classification and assignment of priority date.* Public Law 102–404 provides eligible applicants with automatic classifications as immigrants under section 203(b)(3)(A)(i) of the Act. No immigrant visa petition is required and applicants need not meet the usual requirements for classification as skilled workers. The applicant's priority date shall be the date his or her application for adjustment of status under Public Law 102–404 is properly filed with the Service.

(k) *Effect of immigrant visa number limitations.* Eligible Public Law 102–404 applicants are exempt from the per-country immigrant visa number limitations of section 202(a)(2) of the Act. Eligible Public Law 102–404 applicants may file an application for adjustment of status under Public Law 102–404 without regard to immigrant visa number limitations of sections 202(a)(2) and 203(b)(3)(A)(i) of the Act. However, the adjustment of status application may not be approved and adjustment of status to that of a lawful permanent resident of the United States may not be granted until a visa number becomes available for the applicant under the worldwide allocation of immigrant visa numbers for employment-based aliens under section 203(b)(3)(A)(i) of the Act. The applicant may request initial or continued employment authorization during this period by filing Form I–765, Application for Employment Authorization. If the applicant needs to travel outside the United States during this period, he or she may file a request for advance parole on Form I–131, Application for Travel Document.

(l) *Decision.* In the case of an application for adjustment of status filed pursuant to the provisions of Public Law 102–404, the authority conferred upon district directors in 8 CFR part 245 to accept and adjudicate an application for adjustment of status under section 245 of the Act is delegated exclusively to the service center director having jurisdiction over the applicant's place of residence in the United States. If the service center director transfers the application to the district director, authority to adjudicate an application for adjustment of status filed pursuant to the provisions of Public Law 102–404 lies with the district director having jurisdiction over the applicant's place of residence.

(m) *Effect of enactment on family members other than qualified family members.* The adjustment of status benefits and waivers provided by Public Law 102–404 do not apply to a spouse or child who is not a qualified family member as defined in paragraph (c) of this section. However, a spouse or child whose relationship to the principal alien was established prior to the approval of the principal's adjustment of status application may be accorded the derivative priority date and preference category of the principal alien, in accordance with the provisions of section 203(d) of the Act. The spouse or child may use the priority date and category when it becomes current, in accordance with the limitations set forth in sections 201 and 202 of the Act. Persons who are unable to maintain lawful nonimmigrant status in the United States and are not immediately eligible to apply for adjustment of status may request voluntary departure pursuant to 8 CFR part 242. Persons who have been granted voluntary departure may request employment authorization by filing Form I–765, Application for Employment Authorization.

Dated: June 18, 1993.

Chris Sale,

Acting Commissioner, Immigration and Naturalization Service.

[FR Doc. 93–15782 Filed 6–30–93; 8:45 am]

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Reader Aids

Federal Register

Vol. 58, No. 125

Thursday, July 1, 1993

INFORMATION AND ASSISTANCE

Federal Register

Index, finding aids & general information	202–523–5227
Public inspection desk	523–5215
Corrections to published documents	523–5237
Document drafting information	523–3187
Machine readable documents	523–3447

Code of Federal Regulations

Index, finding aids & general information	523–5227
Printing schedules	523–3419

Laws

Public Laws Update Service (numbers, dates, etc.)	523–6641
Additional information	523–5230

Presidential Documents

Executive orders and proclamations	523–5230
Public Papers of the Presidents	523–5230
Weekly Compilation of Presidential Documents	523–5230

The United States Government Manual

General information	523–5230

Other Services

Data base and machine readable specifications	523–3447
Guide to Record Retention Requirements	523–3187
Legal staff	523–4534
Privacy Act Compilation	523–3187
Public Laws Update Service (PLUS)	523–6641
TDD for the hearing impaired	523–5229

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FEDERAL REGISTER PAGES AND DATES, JULY

35357–35840.....1

CFR PARTS AFFECTED DURING JULY

At the end of each month, the Office of the Federal Register publishes separately a List of CFR Sections Affected (LSA), which lists parts and sections affected by documents published since the revision date of each title.

CFR ISSUANCES 1993
January—April 1993 Editions and Projected July, 1993 Editions

This list sets out the CFR issuances for the January–April 1993 editions and projects the publication plans for the **July, 1993** quarter. A projected schedule that will include the **October, 1993** quarter will appear in the first **Federal Register** issue of October.

For pricing information on available 1992–1993 volumes consult the CFR checklist which appears every Monday in the Federal Register.

Pricing information is not available on projected issuances. The weekly CFR checklist and the monthly List of CFR Sections Affected will continue to provide a cumulative list of CFR titles and parts, revision date and price of each volume.

Normally, CFR volumes are revised according to the following schedule:

Titles 1–16—January 1
Titles 17–27—April 1
Titles 28–41—July 1
Titles 42–50—October 1

All volumes listed below will adhere to these scheduled revision dates unless a notation in the listing indicates a different revision date for a particular volume.

*Indicates volume is still in production.

Titles revised as of January 1, 1993 editions:

Title

CFR Index

1–2

3 (Compilation)

4

5 Parts:
1–699
700–1199
1200–End

6 [Reserved]

7 Parts:
0–26
27–45
46–51
52
53–209
210–299
300–399
400–699
700–899
900–999
1000–1059
1060–1119
1120–1199
1200–1499
1500–1899
1900–1939
1940–1949
1950–1999
2000–End

8

9 Parts:
1–199
200–End

10 Parts:
0–50
51–199
200–399
400–499
500–End

11

12 Parts:
1–199
200–219
220–299
300–499
500–599
600–End

13

14 Parts:
1–59
60–139
140–199
200–1199
1200–End

15 Parts:
0–299
300–799
800–End

16 Parts:
0–149
150–999
1000–End

17 Parts:
1–199
200–239* (Revised as of June 1, 1993)
240–End* (Revised as of June 1, 1993)

18 Parts:
1–149
150–279
280–399
400–End

19 Parts:
1–199
200–End

20 Parts:
1–399
400–499
500–End

21 Parts:
1–99
100–169*
170–199
200–299
300–499
500–599
600–799
800–1299
1300–End

22 Parts:
1–299
300–End

23

24 Parts:
0–199
200–499*
500–699
700–1699
1700–End

25

26 Parts:
1 (§§ 1.0-1–1.60)
1 (§§ 1.61–1.169)
1 (§§ 1.170–1.300)
1 (§§ 1.301–1.400)
1 (§§ 1.401–1.500)
1 (§§ 1.501–1.640)
1 (§§ 1.641–1.850)
1 (§§ 1.851–1.907)
1 (§§ 1.908–1.1000)
1 (§§ 1.1001–1.1400)
1 (§ 1.1401–End)
2–29
30–39
40–49
50–299
300–499
500–599 (Cover only)
600–End

27 Parts:
1–199
200–End (Cover only)

Projected July 1, 1993 editions:

Title

28 Parts:
1–42
43–End

29 Parts:
0–99
100–499
500–899
900–1899
1900–1910 (§§ 1901.1–1910.999)
1910 (§§ 1910.1000–End)
1911–1925
1926
1927–End

30 Parts:
1–199
200–699
700–End

31 Parts:
0–199
200–End

32 Parts:
1–190
191–399
400–629
630–699
700–799
800–End

33 Parts:
1–124
125–199
200–End

34 Parts:
1–299
300–399
400–End

35

36 Parts:
1–199
200–End

37

38 Parts:
0–17
18–End

39

40 Parts:
1–51
52
53–59
60
61–80
81–85
86–99
100–149
150–189
190–259
260–299
300–399

400–424
425–699
700–789
790–End

41 Parts:
Chs. 1–100
Ch. 101
Chs. 102–200
Ch. 201–End

TABLE OF EFFECTIVE DATES AND TIME PERIODS—JULY 1993

This table is used by the Office of the Federal Register to compute certain dates, such as effective dates and comment deadlines, which appear in agency documents. In computing these dates, the day after publication is counted as the first day.

When a date falls on a weekend or holiday, the next Federal business day is used. (See 1 CFR 18.17)

A new table will be published in the first issue of each month.

DATE OF FR PUBLICATION	15 DAYS AFTER PUBLICATION	30 DAYS AFTER PUBLICATION	45 DAYS AFTER PUBLICATION	60 DAYS AFTER PUBLICATION	90 DAYS AFTER PUBLICATION
July 1	July 16	August 2	August 16	August 30	September 29
July 2	July 19	August 2	August 16	August 31	September 30
July 6	July 21	August 5	August 20	September 7	October 4
July 7	July 22	August 6	August 23	September 7	October 5
July 8	July 23	August 9	August 23	September 7	October 6
July 9	July 26	August 9	August 23	September 7	October 7
July 12	July 27	August 11	August 26	September 10	October 12
July 13	July 28	August 12	August 27	September 13	October 12
July 14	July 29	August 13	August 30	September 13	October 12
July 15	July 30	August 16	August 30	September 13	October 13
July 16	August 2	August 16	August 30	September 14	October 14
July 19	August 3	August 18	September 2	September 17	October 18
July 20	August 4	August 19	September 3	September 20	October 18
July 21	August 5	August 20	September 7	September 20	October 19
July 22	August 6	August 23	September 7	September 20	October 20
July 23	August 9	August 23	September 7	September 21	October 21
July 26	August 10	August 25	September 9	September 24	October 25
July 27	August 11	August 26	September 10	September 27	October 25
July 28	August 12	August 27	September 13	September 27	October 26
July 29	August 13	August 30	September 13	September 27	October 27
July 30	August 16	August 30	September 13	September 28	October 28

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