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WHO: The Office of the Federal Register.

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4. An introduction to the finding aids of the FR/CFR system.

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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 JUSTICE

Immigration and Naturalization Service

8 CFR Part 210a

[INS No. 1201-89]

RIN 1115-AB05

Admission or Adjustment of Status of Replenishment Agricultural Workers

AGENCY: Immigration and Naturalization Service; Justice.

ACTION: Interim rule with request for comments and extension of comment date.

SUMMARY: This interim rule amends portions of the existing Part 210a of 8 CFR and sets forth the criteria and procedures to be used to register aliens as a condition precedent to admission or adjustment of the status of replenishment agricultural workers (RAW) for temporary residence under this section. This interim rule also sets forth procedures for expedited interviews of aliens, selected at random, to file petitions for RAW status early in fiscal year 1990. This rule is necessary to ensure that there is a sufficient and timely supply of labor to harvest perishable crops in the United States. The comment date on the interim rule published earlier on this subject is also extended.

DATES: Effective date: This rule is effective September 1, 1989. Comments on this interim rule and the previous interim rule published at 54 FR 29875 (July 17, 1989) must be received on or before October 2, 1989.

ADDRESSES: Written comments should be mailed in triplicate to the deputy Assistant Commissioner, Special Agricultural Worker Programs (SAW), Immigration and Naturalization Service, 425 I Street NW., Washington, DC 20536, or delivered to room 5250 at the same address.

FOR FURTHER INFORMATION CONTACT: Aaron Bodin, Deputy Assistant Commissioner, Special Agricultural Worker Programs (SAW), 202-786-3658.

SUPPLEMENTARY INFORMATION: On July 17, 1989, an interim rule with request for comments was published in the **Federal Register** at 54 FR 29875. This enabled the Service to take action to implement the RAW program while affording the public an opportunity to provide further comment on changes which were incorporated into the interim rule. The comment period expired on August 16, 1989. The Service received 11 comments, representing the views of employer and farmworker advocacy organizations, members of Congress, and individuals.

The Service is hereby amending the July 17, 1989 interim final rule in response to comments received and to clarify certain provisions which pertain only to policies and procedures in effect during the registration period. The reason for this procedure is to promptly make significant changes to the registration process which begins September 1, 1989, while allowing more time for the Service to consider other suggested changes and for additional public comment.

Comments Received

Disqualification for Illegal Entry After November 30, 1988

One commentor stated that by eliminating anyone who has entered the United States after November 30, 1988, we are creating many hardships and proposed a more current illegal entry cut-off date. Another commentor opposes the change in the cut-off date from November 6, 1986 to November 30, 1988 since any attempt to allow an alien who entered after the earlier date to file for RAW status distorts the Congressional intent to limit those eligible for amnesty as part of the overall scheme to stop illegal immigration. The Service will not change this provision. The November 30, 1988 cut off date was proposed to coincide with the deadline for filing an application as a Special Agricultural Worker (SAW) and the institution of employer sanctions on agricultural employers and is a reasonable date based on the intent of IRCA.

Priority Consideration

One commentor stated that priority consideration should not be given to registrants who are currently in the United States since this provision rewards aliens who are illegally in the United States and punishes those aliens who have complied with the law and returned home. Some commentors recommended that registration of aliens overseas be conducted only in the event there are not sufficient registrants living in the United States. Other commentors supported the existing regulations. The Service believes that if overseas registration were not concurrent with registration in the United States, some aliens might seek to enter the United States illegally solely to register. This provision will not be changed.

Family Preference

Section 210a.2(c)(1) provides preference in selection to immediate family members of aliens who have filed an application under IRCA which has been approved. Many commentors stated that since there are significant numbers of applications filed under sections 210 and 245A of IRCA which have not been decided by the Service, it would be fairer if preference in selection was extended to registrants whose relatives' applications were still pending a decision. The Service has adopted this recommendation and has amended § 210a.2(c)(1) and related §§ 210a.1(d) and 210a.7(c) accordingly. The petition of a registrant selected on this basis will be processed, but a final decision will not be made until the relative's IRCA application is adjudicated.

Bilingual Forms

One commentor noting the prohibitive cost of printing forms and instructions in many languages suggested that they be printed only in English, reasoning that printing forms in only English and Spanish unfairly discriminates against other applicants. During the SAW program, 84% of all applications were received from Spanish speaking applicants. While the Service recognizes it cannot print forms in all languages, it is reasonable to provide instructions in the primary language of a larger portion of the expected RAW registrants. The instruction booklets for both the registration and petition forms will be in

both English and Spanish. The forms themselves will be in English.

Minimum Age for Registration

It has been pointed out that the July 17 interim final rule was not clear as to whether persons who did not meet the minimum eligibility criteria because they were too young were returned to the pool of registrants or held in suspense until their birth date. Section 210a.3(a) has been clarified on this point. Registrants must be eighteen (18) years of age to be selected. Registrants who are under age must remain in the pool of registrants until they have turned eighteen (18) years of age. Another commentor supports the Service's decision to maintain the minimum age of eligible workers at 18 since it will ensure the protection of minors.

Registration Process

Several commentors suggested that because of the potentially large numbers of registrants and the uncertainty about a shortage number, there be a staggered registration process to avoid the frustration of registrants who might never be selected. The Service has no way to know how many people will register or what the shortage number will be in this and future years. In the proposed rule of March 3, 1989 the Service had proposed a registration process for fiscal year 1990 only with varying eligibility criteria, based on the size of the shortage number. The Service was persuaded by commentors who urged that a single registration be held for all eligible registrants. Furthermore, conducting more than one registration involves additional costs and expenditure of time and resources that would not otherwise be necessary. This provision will not change.

One commenter agreed that there should be no appeal in the registration process.

Registration Period

Section 210a.3(b) provides for a registration to be held during the period beginning September 1, 1989 and ending October 31, 1989. Most commentors are concerned that the sixty (60) day registration period does not allow enough time for aliens to register, especially since the opportunity to petition for RAW status during the life of the program is limited to aliens who register during this period. The Service agrees and wishes to afford aliens a longer period of time in which to register. Accordingly, the Service will extend the registration period for an additional month to end on November 30, 1989.

Overseas Registration by Qualified Designated Entities (QDE's)

Two commentors criticized the process of using QDE's for overseas registration, believing it discriminates against non-Mexican applicants, since there is no QDE in any other country. As an alternative, commentors propose that registration be conducted through United States Consulates. There is at present no QDE operating outside the United States. Several QDE's have indicated interest in operating in different countries and at least one is planning to locate in Mexico and one in Jamaica. It is not necessary for a QDE to have a physical presence in a country since it can distribute registration cards by mail. Also, requests for registration cards from aliens overseas received by the Service will be referred to QDE's. The Service continues to believe that overseas registration through QDE's will offer a fair opportunity for eligible aliens to register.

One commentor brought to the Service's attention that although the preamble to the July 17, 1989, interim rule stated that aliens residing outside the United States could obtain registration forms and information only through participating QDEs, the body of the regulation did not provide this authority. Section 210a.3(c) has been modified to add this provision.

Several QDEs expressed concern for the return of registration cards to the Service because of problems with mail service in some countries and asked that the Service consider alternative methods for return of registration cards by participating QDEs conducting overseas registration. Section 210a.3(d)(1) has been amended to permit modification of these provisions on a case by case basis upon approval of a written request submitted to the Service by a QDE.

Obtaining I-807 Registration Cards

Several commentors urged the Service to make registration cards available through as many outlets as possible, including QDE's and the post office. The Service had adopted this suggestion and will make cards available through nonparticipating QDE's, farmworker and grower organizations, non-profit organizations and public agencies.

Registration Fee

One commentor supports the requirement of a registration fee and urges an increase in the fee to cover the cost of the new toll-free services that the INS will provide. Since the fee was proposed to cover the costs of registration, including the toll-free services, the fee will remain the same.

Expedited Filing of Petition for RAW Status

Section 210a.5(i). The expedited petition process requires that, upon receipt of the invitation to petition, selected registrants must appear for interview with the petition fee and certain documents immediately and must file the remainder of the petition package within 60 days. Commentors were concerned that the expedited procedure described in the July 17 interim rule did not compel the prompt appearance of an alien and might, therefore, be ineffective in achieving its stated purpose of expediting issuance of employment authorization to apparently eligible petitioners. The Service agrees and has re-written this provision to require that expedited petitioners must, like all other petitioners, return a completed petition to the Service within 60 days of receiving the invitation to petition. The invitation to petition will advise the alien to appear at a Service office as soon as possible with the necessary documents and $175.00 petition fee. If the expedited petitioner fails to appear for interview within 60 days, the invitation to petition is withdrawn and another registrant will be selected and invited to petition. If the interview is conducted and fee taken within the 60 days, but the petitioner fails to complete the petition within that period, a Notice of Intent to Deny will be issued.

The Service wishes to note that the Statute requires the adjustment or admission of RAWs during the fiscal year for which a shortage number is established. Because of this, all processing on all petitions, including appeals, must be completed during that fiscal year. It is essential, therefore, for the Service to prescribe reasonable filing deadlines for petitions and related materials.

Confidentiality

Section 201a.6(g). In the confidentiality provision, as written, information in RAW records may be used to prosecute or deport a person who is the subject of an outstanding arrest warrant. By outstanding arrest warrant, the Service means that a warrant for the arrest of a person has been issued by a court of law in a criminal case. Therefore, the interim rule has been clarified to reflect that records related to a RAW may be released if the person is the subject of an outstanding criminal arrest warrant.

One commentor recommended that certain alien farmworkers presently incarcerated should be released and allowed to apply under section 210a if they wish. The Service wishes to note that all eligible aliens, including those presently in custody can register for RAW status.

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 1(b) of E.O. 12291, nor does this rule have federalism implications warranting the preparation of a Federal Assessment in accordance with Executive Order 12612.

The information collection requirements contained in this rule have been cleared by Office of Management and Budget under the provisions of the Paperwork Reduction Act.

List of Subjects in 8 CFR Part 210a

Aliens, Temporary resident status, Reporting and recordkeeping requirements, Permanent resident status.

Accordingly, part 210a of chapter I of title 8 of the Code of Federal Regulations is amended to read as follows:

PART 210A—[AMENDED]

1. The authority citation for part 210a continues to read as follows:

Authority: 8 U.S.C. 1103; 8 CFR part 2.

§ 210a.1 [Amended]

2. In § 210a.1, paragraph (d) is amended by removing the term "which has been approved" where it appears at the end of the paragraph.

§ 210a.2 [Amended]

3. In § 210a.2, paragraph (c)(1) is amended to add the phrase "or is pending" immediately following the word "approved" where it appears at the end of the first sentence.

§ 210a.3 [Amended]

4. In § 210a.3, paragraph (a) is amended by removing the word "invited" from the last sentence and inserting in its place, the word "selected".

5. In § 210a.3, paragraph (b) is amended by removing the date "October 31, 1989" and inserting in its place, the date "November 30, 1989".

6. In § 210a.3, paragraph (c) is amended to add two new sentences at the end of the paragraph to read as follows: "Persons residing outside the United States can obtain a registration card only from a participating QDE. Non-participating QDEs, farmworker and grower organizations, non-profit community groups and public agencies may also receive cards for distribution to aliens within the United States upon approval of a request to the Regional Commissioner of the Service having jurisdiction over the area of the proposed distribution."

7. In § 210a.3, paragraph (d)(1) is amended to add two new sentences at the end of the paragraph to read as follows: "Participating QDEs operating overseas may be exempted from the requirement to use regular mail when forwarding cards of aliens registered overseas. An alternate means of delivery may be approved by the Service upon written request from the QDE."

§ 210a.5 [Revised]

8. In § 210a.5, paragraph (i) (1), (3), (4), (5), and (6) are revised to read as follows:

§ 210a.5 Petition for temporary resident status.

* * * * *

(i) * * *

(1) The Service will mail a petition package to the address supplied on the registration form, accompanied by a letter which invites the registrant to petition and to appear as soon as possible at any Service office listed on an attachment to the letter. The registrant must appear with the invitation letter, completed I–805 petition, two ADIT photographs, correct fee, proof of identity, age, and proof of family relationship to an IRCA legalized alien, if claimed at registration.

* * * * *

(3) The petitioner must return the fingerprint card, 1 ADIT photograph, any waiver(s) of ground(s) of excludability required, and the results of the required medical examination on Form I–693, to the Service in the envelope provided with the petition package within sixty (60) days from the date of the invitation to petition. Petition materials received by the Service after sixty (60) days will be returned to the petitioner unprocessed.

(4) If all required documentation and evidence is provided to the Service within the sixty (60) day period beginning with the date of the invitation to petition, the petitioner will be informed in writing of the Service's decision regarding the petition. If the petition is approved, the petitioner will be instructed to return to a Service office to exchange Form I–688A for a Temporary Resident Card (Form I–688). If the petition is denied, the petitioner will be informed in writing of his or her appeal rights and procedures to be followed in accordance with § 210a.7(g) of this part.

(5) An alien who fails to appear for the interview within 60 days of the date of the invitation to petition will lose this opportunity to petition, but may be selected at random again. Petition materials received by the Service after sixty (60) days will be returned to the petitioner unprocessed.

(6) Petitioners who timely file their petitions, but who fail to return requested documentation within the sixty (60) days allowed, will be issued a Notice of Intent to Deny for failure to pursue their petition for temporary residence.

§ 210a.6 [Amended]

9. In § 210a.6, paragraph (g) is amended by inserting the word "criminal" after the word "outstanding" and before the word "arrest".

§ 210a.7 [Amended]

10. In § 210a.7, paragraph (c), is amended in the first sentence by inserting the phrase "or a claim to IRCA family preference is made and the relative's IRCA application is pending," after the word "processing," and before the word "may".

Dated: August 25, 1989.

James L. Buck,

Acting Commissioner, Immigration and Naturalization Service.

[FR Doc. 89–20573 Filed 8–31–89; 8:45 am]

BILLING CODE 4410–10–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 87–CE–15–AD; Amdt. 39–6312]

Airworthiness Directives; Beech 65, 70, 80, 90, 99, 100, 200, 300 and 1900 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment revises and reissues Airworthiness Directive (AD) 87–22–01, Amendment 39–5748 applicable to certain Beech 65, 70, 80, 90, 99, 100, 200, 300, and 1900 Series airplanes, which requires inspection of the nose landing gear fork assembly. The FAA has determined that an improved replacement part is available. This revision deletes these inspections if this new, improved part is installed on the airplane.

EFFECTIVE DATE: September 30, 1989.

Compliance: As prescribed in the body of the AD.

ADDRESSES: Beech Service Bulletin No. 2102, Revision I, dated April 1987, Revision II, dated April 1988, or Revision III, dated June 1989, applicable to this AD may be obtained from the Beech Aircraft Corporation, Commercial Services, Department 52, P.O. Box 85, Wichita, Kansas 67201–0085. This information also may be examined at the Rules Docket, FAA, Office of the Assistant Chief Counsel, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Don Campbell, Aerospace Engineer, Airframe Branch, ACE–120W, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone (316) 946–4409.

SUPPLEMENTARY INFORMATION: AD 87–22–01, Amendment 39–5748 (52 FR 45449; November 30, 1987), requires repetitive inspections for fatigue cracks in the nose landing gear fork on certain Beech 65, 70, 80, 90, 99, 100, 200, 300, and 1900 Series airplanes. Forks of welded tubular construction have been found cracked beyond acceptable limits and the replacement parts have also been susceptible to cracking. An improved fork, of forged solid construction, has been developed by Beech and has been satisfactorily fatigue tested. The improved fork is less susceptible to fatigue cracking than the welded tubular fork and the improved fork is currently being installed on production airplanes. This AD revision permits the installation of the improved fork and also eliminates the required recurring inspections if the improved fork is installed. Since the condition addressed by AD 87–22–01 is likely to exist in Beech 65, 70, 80, 90, 99, 100, 200, 300, and 1900 Series airplanes not incorporating the new design nose gear fork, the revision retains the existing requirement for repetitive inspection for cracks in the nose gear fork of all affected airplanes which do not have the new design fork installed. Without this revision to the AD, numerous grants of equivalent means of compliance would continue to be necessary, at expense to the FAA and public alike. Therefore, the FAA has determined that this revision should immediately be made available to the public. Also, the improved part enhances safety, compared to repetitive inspections of the old style fork. In view of the above, it is found that notice and public procedure hereon are impractical and contrary to the public interest, and good cause exists for making this amendment effective in less than 30 days. The regulations adopted herein do not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979.) If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the regulatory docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends § 39.13 of 14 CFR part 39 of the FAR as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. By revising and reissuing AD 87–22–01, Amendment 39–5748 (52 FR 45449; November 30, 1987) to read as follows:

Beech: Applies to Models 65, 65–80, A65, A65–8200, 70, 65–A80, 65–A80–8800, 65–B80, 65–88, 65–90, 65–A90, 65–A90–1, 65–A90–2, 65–A90–3, 65–A90–4 and B90 (all serial numbers (S/N)); C90 and C90A (S/N LJ–502 through LJ–1190); E90, H90, F90, 100, A100, B100, 99, 99A, A99A, B99 and C99 (all S/N); 200 and B200 (S/N BB–2 through BB–1314); 200C, 200CT, 200T, A200, A200C, A200CT, B200C, B200CT and B200T (all S/N); 300 (S/N FA–1 through FA–168 and FF–1 through FF–19); 1900 (all S/N); 1900C (S/N UB–1 through UB–74 and UC–1 through UC–78) airplanes certificated in any category.

Compliance: Required as indicated after the effective date of this AD, unless already accomplished.

To prevent failure of the nose landing gear (NLG) fork due to undetected fatigue cracking, accomplish the following:

(a) Within the next 200 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 100 hours TIS for airplanes in the 65 Series, 70 Series, 80 Series, 99 Series and 1900 Series, and 150 hours TIS for airplanes in the 90 Series, 100 Series, 200 Series and 300 Series, inspect the NLG fork using fluorescent penetrant method in accordance with the instructions in part II of Beech Service Bulletin No. 2102, revision I, dated May 1987, or Revision II dated April 1988, or revision III, dated June 1989.

Note 1: Inspection for slippage of the NLG fork collar on the strut tube per part I of the Service Bulletin is recommended but not required by this AD.

(1) If no cracks are found, the airplane may be returned to service.

(2) If a crack is detected at the tip of the weld, is not more than 0.75 inches in length, and does not branch out into the unwelded tube wall (See figure 1 or figure 2 as applicable), thereafter at intervals not to exceed 25 hours TIS, inspect the NLG fork per paragraph (a) above until replacement with a serviceable part. The replacement part is immediately subject to the conditions of this AD, except as provided by paragraph (b), below.

(3) If a crack is detected that exceeds the limits of paragraph (a)(2), prior to further flight replace the NLG fork with a serviceable part. The replacement part is immediately subject to the conditions of this AD, except as provided by paragraph (b) below.

(b) The repetitive inspections of this AD are no longer required if an improved nose landing gear fork Kit No. 101–830–1S (except 1900 Series) or Kit No. 144–8015–1S (for 1900 Series) is installed.

(c) Airplanes may be flown in accordance with FAR 21.187 to a location where this AD can be accomplished.

(d) An alternate method of compliance or adjustment of the initial or repetitive compliance times, which provides an equivalent level of safety, may be approved by the Manager, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone 316–9846–4400.

Note 2: The request should be forwarded through an FAA Maintenance Inspector, who

may add comments and then send it to the Manager, Wichita Aircraft Certification Office, at the above address. All persons affected by this directive may obtain copies of the documents referred to herein upon request to the Beech Aircraft Corporation, Commercial Service, Department 52, P.O. Box 85, Wichita, Kansas, 67201–0085; or may examine these documents at the FAA, Office of the Assistant Chief Counsel, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

This amendment revises AD 87–22–01, Amendment 39–5748.

This amendment becomes effective on September 30, 1989.

Issued in Kansas City, Missouri, on August 23, 1989.

Barry D. Clements,

Manager, Small Airplane Directorate, Aircraft Certification Service.

BILLING CODE 4910–13–M

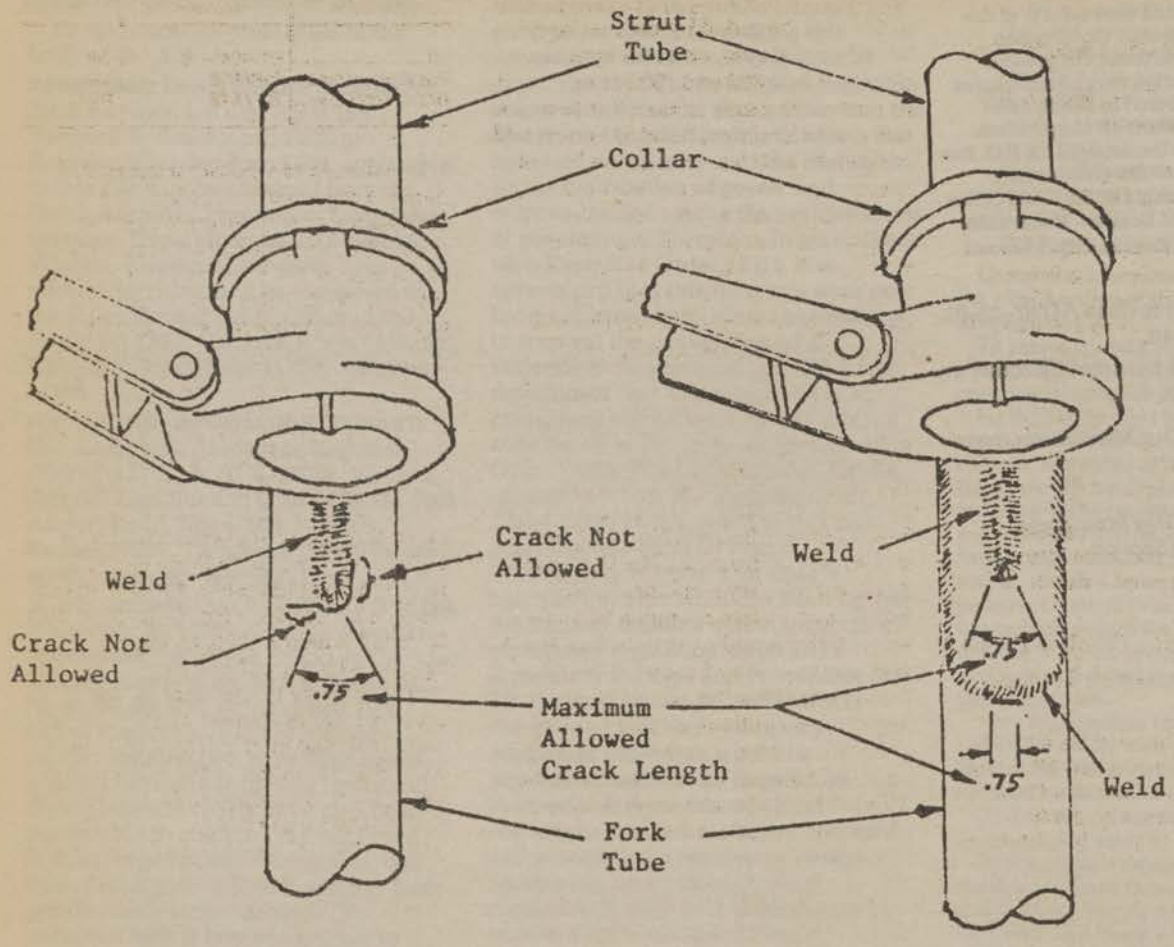


FIGURE 1 FIGURE 2

Left Side Views of Nosegear Fork Assembly
Two Original Configurations Affected by this AD

[FR Doc. 89-20610 Filed 8-31-89; 8:45 am]
BILLING CODE 4910-13-C

14 CFR Part 39

[Docket No. 89-CE-09-AD; Amdt. 39-6316]

Airworthiness Directives; Beech 200 and 300 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new Airworthiness Directive (AD), applicable to certain Beech 200 and 300 Series airplanes, which supersedes AD 87-17-05R1, Amendment No. 39-5847, and mandates repetitive inspections and repair as required of wing fuel bay upper skin panels. The FAA has determined that the repairs and replacement panels specified in AD 87-17-05R1 are ineffective. The actions adopted herein will preclude structural weakening of these panels due to corrosion.

DATES: *Effective Date:* October 3, 1989.

Compliance: As prescribed in the body of the AD.

ADDRESSES: Beech Service Bulletin No. 2040, Rev II, dated December, 1988, and Beech Service Instructions No. C-12-0094, Rev II, dated January, 1989, applicable to this AD, may be obtained from the Beech Aircraft Corporation, Commercial Services, Department 52, P.O. Box 85, Wichita, Kansas 67201-0085; Telephone (316) 681-7111. This information may also be examined at the Rules Docket, FAA, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 89-CE-09-AD, Room 1558, 601 East 12 Street, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Don Campbell, Aerospace Engineer, Airframe Branch, ACE-120W, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; Telephone (316) 946-4409.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to include an AD requiring inspection of the wing fuel bay upper skin panels for debonding, and repair or replacement as necessary on certain Beech 200 and 300 Series airplanes was published in the **Federal Register** on April 19, 1989 (54 FR 15772). The proposal resulted from the determination that the actions specified in AD 87-17-05R1 are inadequate. AD 87-17-01R1, Amendment No. 39-5847, was published in the **Federal Register** on February 17, 1988 (53 FR 4604). AD 87-17-05R1 requires repetitive inspections and repair if necessary, of a debond condition of the wing upper skin panels in the area bounded by the fuselage, nacelle, front spar, and rear spar on certain Beech 200 and 300 series airplanes. The area in question is a one piece, all aluminum, bonded honeycomb sandwich, which serves as the fuel bay upper cover as well as a load carrying structural member. The debonding results when moisture leaks into the honeycomb via blind fasteners (rivets) in the outer face sheet of the panel. The moisture in turn, causes corrosion to form inside the honeycomb, which attacks the face sheet bonds. Without corrective maintenance, the debonding can progress to a point where safe flight is jeopardized. If no debonding is detected, AD 87-17-05R1 requires sealing of all blind fasteners (rivets) per Beech Service Bulletin No. 2040, Rev I (or Service Instructions No. C-12-0094, Rev I, for military airplanes) which involves an external application of a sealant. If debonding is detected, the AD specifies repair by Beech Kit No. 101-4032-1S or -3S, after which the inspections continue and as an alternative, the debonded panel may be replaced by a new panel, part number (P/N) 101-120108-603 or -604, after which the inspections are no longer required.

In the 16 months since AD 87-17-05R1 was issued, the FAA has determined that the present method of sealing is not always effective in keeping moisture out of the honeycomb core, and that Beech Kits No. 101-4032-1S and -3S have been discontinued by the manufacturer. The FAA has also been advised that at least seven of the replacement panels, P/N 101-120108-603 or -604, have been debonded in service. As a result, Beech revised the service information to provide an improved method, Kit No. 101-4048-1S, for sealing the blind rivets, and expanded the inspections to include the new replacement panels.

Temporary Repair Procedure No. SRV.001 is also described in Revision II to the service bulletin. This repair method is specified for use for up to one year from the time of modification in cases where immediate panel replacement is not feasible or desirable. However, a panel which has been previously rebonded using Kit No. 101-4032-1S or -3S may not be repaired again using Kit No. 101-4048-1S. Partial replacement panels, which may be used in lieu of the complete panels, P/N 101-120108-603 or -604, are also referenced in the revised service information as follows:

Description	Number	Wing
Kit	01-4045-1S	Left
Repair procedure	SRV.002	Left
Repair procedure	SRV.018	Right

Regardless of whether a debonded panel is replaced or repaired, the manufacturer recommends that the repetitive inspections continue. In view of the above, the FAA has determined that AD 87-17-05R1 is no longer adequate and should be superseded.

Since the condition described is likely to exist or develop in other Beech 200 and 300 series airplanes of the same design, the FAA proposed a superseding AD which would require repetitive inspections and, if necessary, temporary repair or replacement of all wing fuel bay upper skin panels in accordance with Beech Service Bulletin No. 2040, Rev II, dated December, 1988, or Beech Service Instructions No. C-12-0094, Rev II, dated January, 1989, as appropriate. Interested persons have been afforded an opportunity to comment on the proposal. No comments or objections were received on the proposal or the FAA determination of the related cost to the public. Accordingly, the proposal is adopted without change, except for minor editorial changes and corrections. The FAA has determined that this regulation involves 995 airplanes at an approximate initial and annual cost of $416 and $234, respectively, for each airplane, or a total fleet cost of $415,000 initially plus $233,000 annually. Warranty reimbursement is offered by Beech for a limited time for the cost of rivet sealing (Kit 101-4048-1S) and any repairs or panel replacements needed. The total cost of complying with the AD is less than $100 million, the threshold amount for a significant rule. The cost of compliance with the AD is so small that the expense of compliance will not be a significant impact on any small entities operating these airplanes.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this AD does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Therefore, I certify that this action (1) is not a "major rule" under the provisions of Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44

FR 11034; February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained by contacting the Regional Rules Docket at the location provided under the caption "**ADDRESSES**".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends § 39.13 of 14 CFR part 39 of the FAR as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. By superseding AD 87-17-05R1, Amendment 39-5847, with the following new AD:

Beech: Applies to Models 200, B200, 200C, B200C, 200CT, B200CT, 200T, B200T, A200, A200C, A200CT, and 300 (all serial numbers) airplanes equipped with wing fuel bay upper skin panels made with bonded (honeycomb sandwich) construction, certificated in any category.

Compliance: Required as indicated unless previously accomplished.

To assure the continued structural integrity of the wing fuel bay upper skin panels, accomplish the following:

(a) Within the next 30 days after the effective date of this AD, check the airplane records or inspect the wing fuel bay upper skin panels (hereafter called "skin panels") for possible bonded (honeycomb sandwich) construction. Airplanes in the serial number range of BB-2 thru BB-613 were manufactured with a skin-and-stringer construction and are not affected by this AD unless bonded wing fuel bay upper skin panels were installed after manufacture. If the airplane has bonded skin panels, accomplish the following in accordance with Beech Service Bulletin No. 2040, Rev II, dated December, 1988 (for civil registered airplanes), or Beech Service Instructions No. C-12-0094, Rev II, dated January, 1989 (for military airplanes), as applicable:

(1) If the skin panels are bonded and have blind rivets as shown in the shaded portions of Fig. 1 in the service bulletin, inspect the skin panels for debonding within the next 150 hours time-in-service (TIS) or 6 calendar months, whichever occurs first.

(i) If the skin panel has been previously repaired, per Beech Kit No. 101-4032-1S or 101-4032-3S,

(a) and there is debonding, prior to further flight remove and replace the skin panel and reinspect for debonding at 18 month intervals thereafter.

(b) and there is no debonding, prior to further flight reseal the blind rivets per instructions in Beech Kit 101-4048-1S and reinspect the skin panel for debonding within 6 calendar months, again within another 12 calendar months, and at 18 calendar month intervals thereafter.

(ii) If the skin panel has not been previously repaired,

(a) and there is debonding, either:

(1) prior to further flight remove and replace the skin panel and reinspect for debonding at 18 calendar month intervals thereafter, or

(2) prior to further flight install a temporary repair per Beech Repair Procedure No. SRV.001 which can be used for no longer than 12 calendar months from the time of modification, at which time remove the temporarily repaired panel and replace with a serviceable panel. Reinspect for debonding at 18 calendar month intervals thereafter.

(b) and there is no debonding, prior to further flight reseal the blind rivets and reinspect the skin panel for debonding within 6 calendar months, again within another 12 calendar months, and at 18 calendar month intervals thereafter.

(2) If the skin panels are bonded and do not have blind rivets as shown in the shaded portion of Fig. 1 in the service bulletin, inspect for debonding within the next 600 hours TIS or 18 calendar months, whichever occurs first.

Note 1: The following airplanes were manufactured with bonded skin panels without rivets: Models B200 (above serial number BB-1238), B200C (above serial numbers BL-127), B200CT (above serial numbers BN-4), B200T (above serial numbers BT-30), 300 (above serial numbers FA-81 and all FF-serial numbers).

(i) If there is debonding, either:

(a) prior to further flight remove and replace the skin panel and reinspect for debonding at 18 calendar month intervals thereafter, or

(b) prior to further flight install a temporary repair per Beech Repair Procedure No. SRV.001, which can be used for no longer than 12 calendar months from the time of modification, at which time remove the temporarily repaired panel and replace with a serviceable panel. Reinspect for debonding at 18 calendar month intervals thereafter.

(ii) If there is no debonding, reinspect for debonding at 18 calendar month intervals thereafter.

(3) The following are approved replacement skin panels:

Note 2: These panels are bonded and do not have rivets.

(i) Complete replacement panels are Part Nos. 101-120108-603 (L.H.) and 101-120108-604 (R.H.).

(ii) Kit No. 101-4045-1S and Repair Procedure No. SRV.002 each define a partial replacement panel (L.H. only).

(iii) Repair Procedure No. SRV.018 defines a partial replacement panel (R.H. only).

(b) Airplanes may be flown in accordance with FAR 21.197 to a location where the AD may be accomplished.

(c) An alternate method of compliance or adjustment of the initial or repetitive compliance times which provides an equivalent level of safety may be approved by the Manager, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; Telephone (316) 946-4400.

Note 3: The request should be forwarded through an FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita Aircraft Certification Office, at the above address.

All persons affected by this directive may obtain copies of the documents referred to herein upon request to the Beech Aircraft Corporation, Commercial Service, Department 52, Wichita, Kansas 67201-0085; or may examine these documents at the FAA, Office of the Assistant Chief Counsel, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

This amendment supersedes AD 87-17-05R1, Amendment 39-5847.

This amendment becomes effective on October 3, 1989.

Issued in Kansas City, Missouri, on August 24, 1989.

Barry D. Clements,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 89-20612 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-13-M

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14 CFR Part 39

[Docket No. 89-NM-164-AD; Amdt. 39-6315]

Airworthiness Directives: Boeing Model 767 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 767 series airplanes equipped with a cabin partition wall-mounted flight attendant seat, which requires replacement of the partition upper mounting bolts. This amendment is prompted by reports of loose or missing upper mounting bolts, which are required to structurally secure the partition. This condition, if not corrected, could result in the partition falling over, injuring the flight attendant, and/or blocking an emergency exit and preventing its use during an emergency evacuation.

DATE EFFECTIVE: September 19, 1989.

ADDRESSES: The applicable service information may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or Seattle Aircraft Certification Office, 9010 East Marginal Way South, Seattle, Washington.

FOR FURTHER INFORMATION CONTACT: Pliny Brestel, Airframe Branch, ANM-120S; telephone (206) 431-1931. Mailing address: FAA, Northwest Mountain Region, 17900 Pacific Highway South, C-68966, Seatle, Washington 98168.

SUPPLEMENTARY INFORMATION: The manufacturer advised the FAA of an incident involving a Model 767 series airplane in which a cabin partition with a wall-mounted flight attendant seat, which was occupied, came loose at the upper attachment and fell over. The flight attendant was not injured. Investigation revealed that three of the four upper mounting bolts were missing and the fourth bolt had stripped out. Further, the bolts were too short to engage the self-locking feature of the mating hardware. The upper attachment requires the presence of these bolts to structurally secure the partition. Failure of the bolts to hold the petition could result in injury to a flight attendant, and/or blocking of an emergency exit.

The FAA has reviewed and approved Boeing Alert Service Bulletin 767-25A0135, dated July 6, 1989, which describes the procedures for the replacement of the upper mounting bolts in cabin partitions having a wall-mounted flight attendant seat.

Since this condition is likely to exist on other airplanes of this same type design, this AD requires replacement of the upper mounting bolts in cabin partitions having a wall-mounted flight attendant seat, in accordance with the service bulletin previously described.

Since a situation exists that requires immediate adoption of this regulation, it is found that notice and public procedure hereon are impracticable, and good cause exists for making this amendment effective in less than 30 days.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the regulatory docket (otherwise, an evaluation is not required). A copy of it, when filed, may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air Transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Boeing: Applies to Model 767 series airplanes, as listed in Boeing Alert Service Bulletin 767-25A0135, dated July 6, 1989, certificated in any category. Compliance required within 30 days after the effective date of this AD, unless previously accomplished.

To ensure structural integrity of cabin partitions with a wall-mounted flight attendant seat, accomplish the following:

A. Replace the upper mounting bolts of cabin partitions, in accordance with Boeing Alert Service Bulletin 767-25A0135, dated July 6, 1989.

B. An alternate means of compliance or adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region.

Note: The request should be forwarded through an FAA Principal Maintenance Inspector (PMI), who will either concur or comment, and then send it to the Manager, Seattle Aircraft Certification Office.

C. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of this AD.

All persons affected by this directive who have not already received the appropriate service documents from the manufacturer may obtain copies upon request to Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124. These documents may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or Seattle Aircraft Certification Office, 9010 East Marginal Way South, Seattle, Washington.

Issued in Seattle, Washington, on August 23, 1989.

This amendment becomes effective on September 19, 1989.

Leroy A. Keith,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 89-20613 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-13-M

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14 CFR Part 39

[Docket No. 89-NM-163-AD; Amdt. 39-6314]

Airworthiness Directives; Boeing of Canada, Ltd., de Havilland Division, Model DHC-8-100 and -300 series airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to de Havilland Model DHC-8-100 series airplanes, which currently requires an inspection of the fire bottle squib wiring on the engine fire extinguishing system to determine proper installation, and correction of the installation, if necessary. That action was prompted by reports of the connectors on fire bottle squibs found incorrectly installed on airplanes in service. This condition, if not corrected, could result in a fire bottle being discharged into the wrong nacelle. This amendment expands the applicability of the existing AD to include additional airplanes, and requires the installation of a modification that will prevent displacement and improper connection of the wiring.

EFFECTIVE DATE: September 19, 1989.

ADDRESSES: The applicable service information may be obtained from Boeing of Canada, Ltd., de Havilland Division, Garatt Boulevard, Downsview, Ontario M3K 1Y5, Canada. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or the New York Aircraft Certification Office, Engine and Propeller Directorate, 181 South Franklin Avenue, Room 202, Valley Stream, New York.

FOR FURTHER INFORMATION CONTACT: Richard P. Fiesel, Propulsion Branch, New York Aircraft Certification Office, ANE-174, Engine and Propeller Directorate, 181 South Franklin Avenue, Room 202, Valley Stream New York 11581; telephone (516) 791-7421.

SUPPLEMENTARY INFORMATION: On February 28, 1989, the FAA issued telegraphic AD T89-05-51, applicable to de Havilland Model DHC-8-100 series airplanes, to require a one-time inspection of the fire bottle squib wiring on the engine fire extinguishing system to determine proper installation, and correction of the installation, if necessary. That action was prompted by reports of the connectors on fire bottle squibs found incorrectly installed on airplanes in service. This condition, if not corrected, could result in a fire bottle being discharged into the wrong nacelle.

Since issuance of that telegraphic AD, the FAA has received eight reports of connectors on the fire bottle squibs of the engine fire extinguishing system found incorrectly installed (cross connected). An additional report indicated that, during a wiring check conducted on apparently properly identified and installed fire extinguisher bottles, wires were found that had been mis-terminated within the connector.

De Havilland has developed a modification consisting of the installation of a lanyard between each fire extinguisher squib connector and adjacent structure to minimize the potential for displacement and prevent improper connection. De Havilland Service Bulletin 8-26-9, dated March 23, 1989, describes procedures for installation of this modification, Modification Number 8/1336, "Fire Protection—Fire Extinguisher Squib Electrical Connector Positioning." Transport Canada, which is the airworthiness authority for Canada, has issued an airworthiness directive requiring installation of this modification.

De Havilland has also issued Alert Service Bulletin A8-26-8, dated March 20, 1989, which describes procedures for an inspection to verify proper fire bottle squib wiring in the engine fire extinguishing system. This service bulletin clarifies the inspection procedures described in Alert Service Bulletin A8-26-7, dated February 20, 1989, which was referenced in the existing AD.

Additionally, since issuance of the telegraphic AD, the FAA has type certificated the de Havilland Model DHC-8-300 series airplane for operation in the United States. The design of the engine fire extinguishing system wiring on airplane Serial Numbers 001 through 149 of that model is similar to that of the Model DHC-8-100 series airplanes; therefore, those airplanes would be subject to the same unsafe condition addressed by the existing AD. Beginning with Serial Number 150, Model DHC-8-300 series airplanes were modified in production to include Modification Number 8/1336, described above. (Currently, there are no Model DHC-8-300 series airplanes registered in the United States.)

These airplane models are manufactured in Canada and type certificated in the United States under the provisions of § 21.29 of the Federal Aviation Regulations and the applicable bilateral airworthiness agreement.

Since this situation is likely to exist or develop on other airplanes of the same type design registered in the United States, this AD supersedes telegraphic AD T89-05-51 to require a wiring continuity check of the fire bottle squib wiring on all affected airplanes, regardless of connector identification, and correction of the installation, if necessary; expand the applicability to include Model DHC-8-300 series airplanes; and require installation of Modification Number 8/1336, in accordance with the service bulletin previously described.

Since a situation exists that requires immediate adoption of this regulation, it is found that notice and public procedure hereon are impracticable, and good cause exists for making this amendment effective in less than 30 days.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it it not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the regulatory docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 countinues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by superseding telegraphic AD T89-05-51, issued February 28, 1989, with the following new airworthiness directive:

Boeing of Canada, Ltd., de Havilland Division: Applies to Model DHC-8-100 series airplanes, and Model DHC-8-300 series airplanes, serial numbers 001 through 149, certificated in any category. Compliance required as indicated, unless previouly accomplished.

To ensure that the engine fire extinguishing system bottle squibs are connected to the proper actuating switch, accomplish the following:

A. Within the next 70 hours time-in-service after the effective date of this AD, perform an inspection to verify proper installation of the fire bottle squib wiring in the engine fire extinguishing system, in accordance with the Accomplishment Instructions of de Havilland Alert Service Bulletin A8-26-8, dated March 20, 1989. If the connector identification

sleeves are difficult to read or are damaged, or if it has not been confirmed that the installation is correct, prior to further flight, correct the wiring installation and verify proper wiring in accordance with the service bulletin.

Note: Airplanes on which this inspection and/or repair has previously been performed, as required by paragraphs A. and B. of Telegraphic AD T89-05-51, in accordance with Items 1 through 26 of de Havilland Alert Service Bulletin A8-26-7, dated February 24, 1989, are considered to have complied with the requirements of this paragraph.

B. Within the next 120 hours time-in-service or 30 days after the effective date of this AD, whichever occurs first, install de Havilland Modification Number 8/1336, "Fire Protection—Fire Extinguisher Squib Electrical Connector Positioning," in accordance with the Accomplishment Instructions of de Havilland Service Bulletin 8-26-9, dated March 23, 1989.

C. An alternate means of compliance or adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate.

Note: The request should be forwarded through an FAA Principal Maintenance Inspector (PMI), who may add any comments and then sent it to the Manager, New York Aircraft Certification Office.

D. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of this AD.

All persons affected by this directive who have not already received the appropriate service information from the manufacturer may obtain copies upon request to Boeing of Canada, Ltd., de Havilland Division, Garatt Boulevard, Downsview, Ontario M3K 1Y5, Canada. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or the New York Aircraft Certification Office, Engine and Propeller Directorate, 181 South Franklin Avenue, Room 202, Valley Stream, New York.

The amendment supersedes Telegraphic AD T89-05-51, issued February 28, 1989.

This amendment becomes effective September 19, 1989.

Issued in Seattle, Washington, on August, 23, 1989.

Leroy A. Keith,

Manager, Transport Airplane Directorate Aircraft Certification Service.

[FR Doc. 89-20614 Filed 8-31-89; 8:45am]

BILLING CODE 4910-13-M

14 CFR Part 39

[Docket No. 87-ASW-39; Amdt. 39-6313]

Airworthiness Directives; Messerschmitt-Bolkow-Blohm GmbH (MBB) Model BO-105 Series Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment amends an existing airworthiness directive (AD) which requires inspection and repair or replacement, as necessary, of main rotor pitch links on MBB Model BO-105 series helicopters. This amendment is needed to clarify that the daily check of the main rotor pitch link control rods for binding in the bearings may be conducted by either a mechanic or a pilot.

DATES: *Effective Date:* September 26, 1989.

Compliance: As indicated in the body of the AD.

ADDRESSES: The applicable service information (Alert Service Bulletin No. ASB-BO-105-10-103) may be obtained from the MBB Helicopter Corporation, P.O. Box 2349, West Chester, Pennsylvania 19380. These documents may also be examined at the Office of the Assistant Chief Counsel, Federal Aviation Administration, Southwest Region, Room 158, Building 3B, 4400 Blue Mound Road, Fort Worth, Texas.

FOR FURTHER INFORMATION CONTACT: Mr. John Varoli, Manager, Aircraft Certification Service Office, FAA, Europe, Africa, and Middle East Office, c/o American Embassy, Brussels, Belgium, APO NY 09667, telephone number 513.38.30; or Mr. J.H. Major, Rotorcraft Directorate, FAA, Rotorcraft Standards Staff, ASW-110, Fort Worth, Texas 76193-0111, telephone (817) 624-5117.

SUPPLEMENTARY INFORMATION: This amendment amends Amendment 39-5795 (52 FR 46991; December 11, 1987), AD 87-26-02, which currently requires inspection of the main rotor pitch links for freedom of bearing operation and for cracks, and repair or replacement, as necessary, on MBB Model BO-105 series helicopters. Amendment 39-5795 does not expressly allow pilots to conduct the daily checks of the main rotor pitch links for binding in the bearings. That was not intended by the FAA in issuing the rule. Therefore, the FAA is amending Amendment 39-5795 to make it clear that pilots, as well as mechanics, may conduct the checks of the main rotor pitch links for binding as described in paragraph (a)(1) of AD 87-26-02 on MBB Model B-105 series helicopters. Individual operators have petitioned and received approval under paragraph (f) to allow pilots to conduct the checks. This change to the rule will permit other operators to exercise the same privilege.

Since this amendment provides a clarification only, and imposes no additional burden on any person, notice and public procedure hereon are unnecessary, and the amendment may be made effective in less than 30 days.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is clarifying in nature and imposes no further cost. Therefore, I certify that this action: (1) is not a "major rule" under Executive Order 12291; and (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the final evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained from the Regional Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, and Safety.

Adoption of the Amendment

PART 39—AIRWORTHINESS DIRECTIVE

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends § 39.13 of 14 CFR part 39 of the FAR as follows:

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 3154(a), 1421, and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by amending Amendment 30-5795 (52 FR 46991; December 11, 1987), AD 87-26-02, by revising paragraph (a)(1) to read as follows:

Messerschmitt-Bolkow-Blohm (MMB): Applies to Model BO-105 series helicopters, certificated in any category, equipped with main rotor blade rotating control rod ends, P/N's 105-13141.01 and 105-13142.01.

* * * * *

(a) * * *

(1) Check the bearings on each control rod by rotating the rod about its longitudinal axis by hand. This check may be conducted by the pilot and must be recorded in accordance with § 43.9.

Note: The pilot, when complying, must make appropriate entries and the record must be maintained per § 91.173 or § 135.439.

* * * * *

This amendment becomes effective September 26, 1989.

This amendment amends Amendment 39-5795 (52 FR 46991; December 11, 1987), AD 87-26-02.

Issued in Fort Worth, Texas, on August 22, 1989.

James D. Erickson,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 89-20611 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-13-M

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14 CFR Part 39

[Docket No. 88-ANE-45; Amdt. 39-6275]

Airworthiness Directives; Pratt & Whitney Canada (PWC) PW115/118/118A and PW120/120A/121 Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action publishes in the Federal Register and makes effective as to all persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of certain PW115/118/118A and PW120/120A/121 turboprop engines by individual telegrams. The AD establishes a reduced low cycle fatigue (LCF) life limit on certain high pressure turbine (HPT) components. The AD is needed to prevent LCF cracking of the affected components which could lead to an uncontained engine failure.

DATES: *Effective:* September 22, 1989, as to all persons except those persons to whom it was made immediately effective by telegraphic AD (TAD) No. T88-26-51, issued December 28, 1988, which contained this amendment.

Compliance: As indicated in the body of the AD.

Incorporation by Reference—Approved by the Director of the Federal Register as of September 22, 1989.

ADDRESSES: The applicable engine manufacturer's service bulletins (SB) may be obtained from Pratt & Whitney Canada, 1000 Marie Victorin, Longueuil, Quebec, Canada J4G 1A1, or may be examined at the Regional Rules Docket, Room 311, Office of the Assistant Chief Counsel, Federal Aviation Administration, New England Region, 12 New England Executive Park, Burlington, Massachusetts 01803.

FOR FURTHER INFORMATION CONTACT: Diane M. Cook, Engine Certification Branch, ANE-142, Engine Certification Office, Engine and Propeller Directorate, Aircraft Certification Service, Federal Aviation Administration, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (617) 273-7082.

SUPPLEMENTARY INFORMATION: On December 28, 1988, TAD T88-26-51 was issued and made effective immediately to all known U.S. owners and operators of certain PW115/118/118A and PW120/120A/121 turboprop engines.

The TAD reduced the LCF life limit for the HPT front cover, Part Numbers (P/N's) 3035181 and 3104285-01; the HPT rear cover, P/N's 3035182 and 3104285-01; and the HPT disk, P/N 3035711, installed in certain PW115/118/118A and PW120/120A/121 turboprop engines. The FAA has determined that these HPT components accumulate fatigue damage at a faster rate than originally predicted.

An investigation of a cracked HPT disk revealed higher than predicted thermal stresses. Re-evaluation of the LCF life analysis with recalibrated cooling air data surrounding the HPT rotor indicated that engines incorporating the cooling air nozzle housing assembly (ANH), P/N 3106642-01, and the HPT stubshaft, P/N 3104413-01, have a lower cyclic life on certain HPT components than engines incorporating ANH, P/N 3106642-02, and HPT stubshaft, P/N 3104413-03. The allowable cyclic life on certain HPT components installed in engines incorporating ANH, P/N 3106642-01, and HPT stubshaft, P/N 3104413-01, must be reduced by a factor of one-third. The hourly life limit is unchanged. PWC SB 20002, Revision 4, dated November 21, 1988, has reduced the cyclic life of these HPT components installed in engines incorporating ANH, P/N 3106642-01, and the HPT stubshaft, P/N 3104413-01, by adjusting the flight count factor (FCF) from 1.0 to 1.5. However, when these HPT components are installed in an engine incorporating ANH, P/N 3106642-02, and the HPT stubshaft, P/N 3104413-03, in accordance with PWC SB 20133, dated September 14, 1987, the FCF is 1.0. For those HPT components which have accumulated cycles with both engine nozzle configurations, the new total accumulated cycles are determined by applying the appropriate FCF in accordance with the procedures defined in PWC SB 20002, Revision 4, dated November 21, 1988.

Since it was found that immediate corrective action was required, notice and public procedure thereon were impracticable and contrary to public interest, and good cause existed to make the AD effective immediately by individual telegrams, issued December 28, 1988, to all known U.S. owners and operators of certain PW115/118/118A, and PW120/120A/121 turboprop engines. These conditions still exist, and the AD is hereby published in the **Federal Register** as an amendment to § 39.13 of Part 39 of the Federal Aviation Regulations to make it effective as to all persons.

The regulations adopted herein do not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Executive Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). If this action is subsequently determined to involve a significant/major regulation, a final regulatory evaluation or analysis, as appropriate, will be prepared and placed in the regulatory docket (otherwise, an evaluation or analysis is not required). A copy of it, when filed, may be obtained by contacting the Rules Docket at the location provided under the caption "**ADDRESSES**".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, and Incorporation by reference.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator,

the Federal Aviation Administration (FAA) amends 14 CFR Part 39 of the Federal Aviation Regulations (FAR) as follows:

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97–449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive (AD):

Pratt & Whitney Canada: Applies to Pratt & Whitney Canada (PWC) PW115/118/118A turboprop engines prior to Serial Number (S/N) PCE 115033, and PW120/120A/121 turboprop engines prior to S/N PCE 120174.

Compliance is required as indicated, unless already accomplished.

To prevent an uncontained engine failure resulting from low cycle fatigue failure of certain high pressure turbine (HPT) components, accomplish the following:

(a) Determine upon receipt of this AD the cyclic life accumulated on the HPT front cover, HPT rear cover, and HPT disk, in accordance with PWC Service Bulletin (SB) 20002, Revision 4, dated November 21, 1988, paragraph 2.D.(1), as follows:

(1) For engines which have not incorporated PWC SB 20133, dated September 14, 1987, calculate the total cyclic life accumulated using a flight count factor (FCF) of 1.5 in accordance with the formula found in PWC SB 20002, Revision 4, paragraph 2.D.(1)

(2) For engines which have not incorporated PWC SB 20133, dated September 14, 1987, calculate the total cyclic life accumulated prior to the incorporation of PWC SB 20133 using an FCF of 1.5, plus the total cycles accumulated after the incorporation of PWC SB 20133 using an FCF of 1.0, in accordance with the note in PWC SB 20002, Revision 4, paragraph 2.D.(1)

(b) Remove from service and replace with a serviceable part within 25 cycles in service (CIS) from the receipt of this AD, those HPT front covers, HPT rear covers, or HPT disks which have accumulated 14,975 CIS or greater upon recepit of this AD, as calculated in accordance with paragraph (a)(1) or (a)(2) of this AD.

(c) Remove from service and replace with a serviceable part at or prior to accumulating 15,000 CIS, those HPT front covers, HPT rear covers, or HPT disks which have accumulated less than 14,975 CIS upon receipt of this AD, as calculated in accordance with paragraph (a)(1) or (a)(2) of this AD.

(d) Aircraft may be ferried in accordance with the provisions of FAR 21.197 and 21.199 to a base where the AD can be accomplished.

(e) Upon submission of substantiating data by an owner or operator through an FAA Airworthiness Inspector, an alternate method of compliance with the requirements of this AD or adjustment to the compliance times specified in this AD may be approved by the Manager, Engine Certification Office, ANE–140, Engine and Propeller Directorate, Aircraft Certification Service, Federal Aviation Administration, 12 New England Executive Park, Burlington, Massachusetts 01803.

The determination of the cyclic life accumulated on the HPT front cover, HPT rear cover, and HPT disk shall be accomplished in accordance with PWC SB 20002, Revision 4, dated November 21, 1988. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1. Copies may be inspected at the Regional Rules Docket, Office of the Assistant Chief Counsel, Federal Aviation Administration, New England Region, 12 New England Executive Park, Room 311, Burlington, Massachusetts 01803, or at the Office of the Federal Register, 1100 L Street, Room 8301, Washington, DC 20591.

This amendment becomes effective September 22, 1989, as to all persons except those persons to whom it was made immediately effective by TAD T88–26–51, issued December 28, 1988, which contained this amendment.

Issued in Burlington, Massachusetts, on July 13, 1989.

Jack A. Sain,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 89–20607 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–13–M

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14 CFR Part 39

[Docket No. 89–ANE–23; Amdt. 39–6308]

Airworthiness Directives; Teledyne Continental Motors (TCM) Model TSIO–520BE Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action publishes in the **Federal Register** and makes effective as to all persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of certain TCM Model TSIO–520BE engines by individual priority letter AD 89–14–01. The AD requires repetitive checks of the crankshaft end play, a one-time check of the thru-bolt torque, and repetitive inspections of the number two crankshaft bearing. The AD is needed to prevent possible shifting of the crankshaft bearing which could result in total loss of engine power.

DATES: *Effective:* September 22, 1989, as to all persons except those to whom it was made immediately effective by priority letter AD 89–14–01, issued June 30, 1989, which contained this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 22, 1989.

Compliance: As prescribed in the body of the AD.

ADDRESSES: The applicable service bulletin (SB) may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, Alabama 36601, or may be examined in the Regional Rules Docket, Room 311, Office of the Assistant Chief Counsel, Federal Aviation Administration, New England Region, 12 New England Executive Park, Burlington, Massachusetts 01803.

FOR FURTHER INFORMATION CONTACT: Jerry Robinette, Aerospace Engineer, Propulsion Branch, ACE–140A, Atlanta Aircraft Certification Office, Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 1669 Phoenix Parkway, Suite 210C, Atlanta, Georgia 30349; telephone (404) 991–3810.

SUPPLEMENTARY INFORMATION: On June 30, 1989, priority letter AD 89–14–01 was issued and made effective immediately as to all known U.S. owners and operators of certain TCM Model TSIO–520–BE engines. The AD requires repetitive checks of the end play, a one-time check of the thru-bolt torque, and repetitive inspections of the number two crankshaft bearing. There have been several occurrences where the crankshaft bearings have shifted on the subject engines and contacted the crankshaft fillet radius. This may result in crankshaft failures if not detected by TCM prescribed inspections. One such failure has occurred since the issuance of AD 87–26–08. The reason for this bearing shift is not completely understood. It is suspected that the bearing shift occurs because of inadequate crush of the bearings in the crankcase halves during the original torquing of the thru-bolts using a suspect lubricant. Believing that bearing shift could be detected, AD 87–26–08 was issued requiring a one-time thru-bolt torque check. There have been service difficulties since issuance of AD 87–26–08 and TCM issued SB M89–11 requiring another thru-bolt torque check. The FAA did not issue an AD for TCM SB M89–11 because there was no technical proof that the additional thru-bolt torque check would correct the problem. There

have been 75 torque checks conducted in accordance with TCM SB M89–11 and 5 suspect engines have been removed from service. A recent check of a TSIO–520–BE engine installed in a PA46–310P airplane at the Piper facility confirmed that the thru-bolt torque check is not adequate. This airplane/engine had 75 hours time-in-service since SB M89–11 had been successfully completed when it was discovered that the bearing had shifted. Subsequent investigation has confirmed that SB M89–11 is not adequate. A visual inspection is the only positive way to insure there is no bearing shift. The investigation also showed that the bearing shift had occurred at the number two main bearing position in all known cases. AD action was necessary to prevent possible shifting of the crankshaft bearing which can result in total loss of engine power.

Since it was found that immediate corrective action was required, notice and public procedure thereon were impracticable and contrary to public interest, and good cause existed to make the AD effective immediately by individual priority letters issued June 30, 1989, as to all known U.S. owners and operators of certain TCM Model TSIO–520BE engines. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to § 39.13 of Part 39 of the Federal Aviation Regulations (FAR) to make it effective as to all persons.

The regulations adopted herein do not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Executive Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been further determined that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). If this action is subsequently determined to involve a significant/major regulation, a final regulatory evaluation or analysis, as appropriate, will be prepared and placed in the regulatory docket (otherwise, an evaluation or analysis is not required). A copy of it, when filed, may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Engines, Air transportation, Aircraft, Aviation safety, and Incorporation by reference.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration (FAA) amends 14 CFR Part 39 of the Federal Aviation Regulations (FAR) as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive (AD):

Teledyne Continental Motors (TCM): Applies to TCM Model TSIO–520BE engines (Serial Numbers 528001 through 528337) certificated in any category. Engines which have had the crankcase split and inspected and new bearings installed, since the accomplishment of AD 87–26–08, are exempt from the requirements of this AD.

Compliance required as indicated, unless already accomplished.

To prevent the possible loss of engine power, accomplish the following:

(a) Prior to further flight and at intervals not to exceed 25 hours time-in-service, accomplish the crankshaft end play check in accordance with Section A of TCM Service Bulletin (SB) M89–14, dated June 29, 1989. If the crankshaft has no end play, the engine must be removed from service.

(b) Prior to further flight, accomplish the thru-bolt torque check in accordance with Section B of TCM SB M89–14, dated June 29, 1989. If the force required to rotate the propeller is not within the range specified or if the force required to rotate the propeller after retorquing has changed from the previous value by more than 3 pounds or if the crankshaft has no end play, the engine must be removed from service.

(c) Prior to further flight and at intervals not to exceed 200 hours time-in-service, accomplish the visual inspection of the number two crankcase main bearing in accordance with Section C of TCM SB M89–14, dated June 29, 1989. If there is any indication of bearing shift within the crankcase or crankshaft fillet/bearing contact or mismatch of bearing halves at the case split line, the engine must be removed from service.

(d) The repetitive checks and inspections required by paragraphs (a) and (c) of this priority letter AD may be discontinued when the crankcase has been split and inspected and new bearings are installed.

(e) Make appropriate log book entry showing compliance with this AD and record results of crankshaft end play and pounds required to rotate propeller.

(f) Aircraft may be ferried in accordance with the provisions of Federal Aviation Regulations 21.197 and 21.199 to a base where this AD can be accomplished.

(g) Upon submission of substantiating data by an owner or operator through an FAA Airworthiness Inspector, the Manager, Atlanta Aircraft Certification Office, Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 1669 Phoenix Parkway, Suite 210C, Atlanta, Georgia 30349, may approve an equivalent means of compliance or an adjustment of the compliance time schedule specified in this AD, which provides an equivalent level of safety.

The checks and inspections shall be done in accordance with TCM SB M89–14, dated June 29, 1989. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, Alabama 36601. Copies may be inspected at the Regional Rules Docket, Office of the Assistant Chief Counsel, Federal Aviation Administration, New England Region, 12 New England Executive Park, Room 311, Burlington, Massachusetts 01803, or at the Office of the Federal Register, 1100 L Street, Room 8301, Washington, DC 20591.

This amendment becomes effective on September 22, 1989, as to all persons except those persons to whom it was made immediately effective by priority letter AD No. 89–14–01, issued June 30, 1989, which contained this amendment.

Issued in Burlington, Massachusetts, on August 10, 1989.

Jack A. Sain,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 89–20608 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–13–M

Office of the Secretary

14 CFR Part 221

[Docket No. 43343; Notice No. 89–15]

RIN 2105–AB00

Electronic Filing of Tariffs

AGENCY: Office of the Secretary, Department of Transportation.

ACTION: Amendment to preamble of final rule and Dismissal of Petition for reconsideration.

SUMMARY: The Department is providing notice of a change in its internal procedures relating to the "downloading" of electronic records submitted daily to the "Official DOT Tariff Database" under its rule on Electronic Filing of Tariffs. The Department is also dismissing a Petition for Reconsideration filed by ABC International in response to that rule.

EFFECTIVE DATE: September 1, 1989.

FOR FURTHER INFORMATION CONTACT: Thomas G. Moore, Chief, Tariffs Division, Office of International Aviation, P–44, Department of Transportation, 400 7th Street SW., Washington, DC 20590, (202) 366–2414.

SUPPLEMENTARY INFORMATION:

Change in the Downloading Function

On January 19, 1989, we published a final rule (54 FR 2087), permitting the international airlines to file their passenger fare tariffs with DOT electronically. In discussing the various measures we were undertaking to ensure the integrity of the data, we noted our intent to record (download) onto Departmental computers *all* daily data transactions submitted by the filers. We would then compare these downloaded records with the daily records furnished by the filer on a machine-readable tape or other mutually acceptable electronic media to the Department under the rule.

On July 17, 1989, we began receiving electronic passenger fare filings on an experimental basis. We have now determined that we can successfully ensure the integrity of the submitted tariff data without daily downloading of all filings. On the basis of our experiment, we have determined that by downloading five percent of the daily filings on a systematic sample, with a random start each day, *i.e.*, based on a table of random filing advice numbers, we can ensure the integrity and accuracy of the "Official DOT Tariff Database" to a degree of reliability substantially equivalent to that which we had contemplated in formulating the final rule. This five percent random sample constitutes a sufficient base for comparison purposes and will allow us to quickly detect any discrepancies in the data being submitted. In the event there are any discrepancies we will take immediate corrective measures. We will implement this change in internal procedures upon the effective data of this notice. Of course, should the need arise, we could institute daily downloading of all filings.

Petition for Reconsideration

On February 8, 1989, ABC International filed a petition for reconsideration of our final rule. ABC's petition essentially restates its comment submitted in response to our Notice of Proposed Rulemaking (53 FR 25615, July 8, 1988), *i.e.*, that the filer should be required to make available to any user or any other interested person, on a reasonable, non-discriminatory basis keyed to added costs, the "raw tariff data" used to produce the tariff information appearing on a video display screen. It claims that the rule is inconsistent because it requires that subscription prices for remote access to the on-line tariff database not exceed the reasonable added cost of providing that service, but does not apply the same requirement to copies of machine-readable raw tariff data.

On February 13, 1989, the Airline Tariff Publishing Company (ATPCO) submitted a letter to Mr. Neil Eisner, the Department's Assistant General Counsel for Regulation and Enforcement, requesting rejection of ABC's petition on the grounds that the Department's Rules of Practice do not provide for the relief sought by ABC. We agree. ABC in its petition relies on 14 CFR sections 302.18 and 302.37 in support of its request. Our review of these sections discloses that ABC's reliance on them is misplaced. We note in any event that ABC's petition has raised no issues not already before us at the time we adopted our final rule, and that in the final rule we fully responded to ABC's concerns.

Accordingly, we dismiss the Petition for Reconsideration filed by ABC International in Docket 43343.

This notice is being issued under the authority delegated to the Assistant Secretary for Policy and International Affairs contained in 49 CFR 1.56(j)(2)(ii).

Issued in Washington, DC, on August 28, 1989.

Patrick V. Murphy, Jr.,

Deputy Assistant Secretary for Policy and International Affairs.

[FR Doc. 89–20643 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–62–M

INTERNATIONAL TRADE COMMISSION

19 CFR Part 207

Panel Review Under Article 1904 of the United States-Canada Free-Trade Agreement

AGENCY: U.S. International Trade Commission.

ACTION: Revised interim rules and request for comment.

SUMMARY: Title IV of the United States-Canada Free-Trade Agreement Implementation Act of 1988, Public Law No. 100–449 (September 28, 1988) ("FTA Act") addresses binational panel review of United States antidumping and countervailing duty final determinations involving Canadian products and for requests for panel review of Canadian antidumping and countervailing duty final determinations involving products from the United States. Title IV implements chapter 19 of the United States-Canada Free-Trade Agreement ("Agreement"). As authorized by section 405(d) of the FTA Act, these regulations are intended to implement certain administrative procedures required by Article 1904 of the Agreement and the FTA Act.

DATES: These revised interim rules take effect on September 1, 1989. Written comments must be received not later than October 31, 1989.

ADDRESS: A signed original and fourteen (14) copies of each set of comments, along with a cover letter addressed to Kenneth R. Mason, Secretary, should be sent to the U.S. International Trade Commission, Office of the Secretary, 500 E Street SW., Room 112, Washington, DC 20436.

FOR FURTHER INFORMATION CONTACT: Andrea C. Casson, Esq., 202–252–1105, Elizabeth C. Hafner, Esq., 202–252–1113 or Laurie B. Horvitz, Esq., 202–252–1107. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202–252–1810.

SUPPLEMENTARY INFORMATION:

Background

Chapter 19 of the Agreement establishes a mechanism resolving disputes between the United States and Canada with respect to antidumping and countervailing duty cases. The central feature of the mechanism is the replacement of domestic judicial review

of determinations in antidumping and countervailing duty cases involving imports from the other country with review by binational panels. The United States and Canada will continue to apply their own national antidumping and countervailing duty laws to goods imported from the other country. In such cases, binational panels acting in place of national courts will expeditiously review final determinations under these laws to decide whether they are consistent with the antidumping or countervailing duty law of the country that made the determination. These determinations include final determinations by the Department of Commerce ("Commerce") and the U.S. International Trade Commission ("Commission") under title VII of the Tariff Act of 1930, as amended.

The Agreement provides that only the two governments may invoke the panel review process; however, the government of the United States will automatically trigger panel review in response to a timely request from any person who otherwise could have challenged the determination in court. Counsel for the participants will argue their positions before the panel, as they would before a court. Each panel will consist of two panelists chosen from a United States roster, two panelists chosen from a Canadian roster, and a fifth United States or Canadian panelist chosen by agreement or by lot. The Agreement also requires that the United States and Canada protect sensitive business information against unlawful disclosure in the panel review process.

The Agreement further provides for review of a panel decision by an extraordinary challenge committee ("committee") when either the United States government or the Canadian government alleges that a panelist materially violated the rules of conduct, or that the panel seriously departed from a fundamental procedural rule or exceeded its powers, authority or jurisdiction. The Committee will consist of three members, all of whom will be sitting or retired United States or Canadian judges, with at least one member from each country.

The administrative operations of panel and extraordinary challenge committee proceedings will be carried out by a Secretariat. The Secretariat will consist of a United States Secretary, located in Washington, DC and a Canadian Secretary located in the National Capital Region of Canada. By Executive Order, the United States Secretary will be located in the Department of Commerce.

Section 405 of the FTA Act establishes an interagency group, chaired by the United States Trade Representative, which will be responsible for preparing the United States rosters of potential panelists and potential committee members, and for evaluating whether the United States should seek extraordinary challenge committee reviews.

Title IV of the FTA Act amends U.S. law to implement chapter 19 of the Agreement by limiting judicial review in cases involving Canadian merchandise, establishing procedures whereby private parties may appeal for binational panel review, providing organizational structure for administering U.S. responsibilities under chapter 19, and making other conforming amendments to U.S. law. Section 405(d) of the FTA Act authorizes the Commission to issue regulations to implement chapter 19 of the Agreement.

The procedures for binational panels have been implemented through Rules of Procedure issued jointly by the United States and Canada (53 FR 53212, Dec. 30, 1988). These regulations are intended to implement certain administrative procedures required by chapter 19 of the Agreement involving administrative responsibilities of the Commission that continue during and after panel review. Specifically, the regulations address release of business proprietary and privileged information under protective order during a panel review, and sanctions for violations of the provisions of such protective orders. The regulations complement and should be used in conjunction with, the Rules of Procedure.

The Commission published its original interim-final rules on December 30, 1988 (53 FR 53248). Those rules became effective on January 1, 1989. The comment period ended on March 1, 1989. No public comments were received. The rules were, however, reexamined internally, and changes have been made to reflect concerns that arose during this internal review. Significant changes are discussed in the explanation that follows.

This revised interim rule is exempt from the requirements of section 553 of the Administrative Procedure Act (5 U.S.C. 553), because it implements chapter 19 of the Agreement and thus relates to a foreign affairs function of the United States.

The Commission has determined that this rule does not constitute a major rule for the purposes of Executive Order 12291 (46 FR 13193, Feb. 17, 1981), because it does not meet the criteria described in section 1(b) of the EO. Moreover, because this rule concerns a foreign affairs function of the United States, it is not a rule within the meaning of section 1(a) of the EO.

The Regulatory Flexibility Act does not apply to this rule because it does not affect a large number of small entities, and because the rule was not required by section 553 of the Administrative Procedure Act or by any other law to be promulgated as a revised interim rule before issuance as a final rule. Nonetheless, the Commission, in its discretion, has decided to issue a revised interim rule, in order to solicit comments that the Commission believes may be helpful in determining the content of the final rules.

Explanation of Revised Interim Rules

Section 207.90

This section provides the scope of Subpart G, which is to implement Article 1904 of the Agreement.

Section 207.91

This section provides definitions of terms used in Subpart G. Three definitions have been added by these rules. For purposes of § 207.93, the terms "clerical person", "counsel" and "professional" have been defined. These definitions simplify references in that section to counsel and professionals. In addition, they clarify who may apply for our retain access to proprietary information during panel review.

Section 207.92

There are two types of documents that put the Commission on notice that an antidumping or countervailing duty final determination involving Canadian products may be subject to review. These documents are a Notice to Commence Judicial Review ("Notice") and a Request for Panel Review ("Request"). The Tariff Act of 1930 ("Tariff Act"), as amended by section 401 of the FTA Act, provides that Commerce, in consultation with the Commission, shall by regulation prescribe the form, manner and style of Notices and Requests. 19 U.S.C. 1516a(g)(3)(B) and (8)(A). The relevant regulations will be contained in part 356 of Title 19 of the Code of Federal Regulations, which part will contain Commerce's regulations for implementation of Article 1904 of the Agreement. Section 207.92 of the Commission's regulations refers to Commerce's regulations for the requirements for Notices and Requests.

Section 207.93

The Tariff Act, as amended by section 403 of the FTA Act, provides for certain persons to have access to business proprietary information contained in the Commission's administrative record before the panel, but only if these persons obtain a protective order issued by the Commission. Section 207.93

implements this provision. The persons who are eligible for access upon the filing of an application for protective order and the issuance of such an order are: The panelists and committee members, and any non-clerical staff whom they employ; counsel for participants in the panel review and for interested persons who plan to become participants, and their non-clerical staff; professionals under the direction and control of counsel; the Secretaries of the Canadian and United States sections of the Secretariat and their staffs; and United States government officials, or their delegates, who are members of the interagency group designated to consider whether the United States should seek to convene an extraordinary challenge committee. The persons who have access to proprietary information without protective orders are: The participant that submitted the information; that participant's counsel; and officials and employees of the Commission who are directly involved in the panel review or were involved in the underlying administrative proceeding.

Subsection (b) outlines the procedures for applying for a protective order. Panelists, committee members, non-clerical staff of panelists and committee members, counsel, professionals under the direction and control of counsel, the Secretaries and their staffs, and designated U.S. government employees must apply for a protective order in order to receive access. Clericals, such as law clerks, paralegals, and secretaries, who are employed by panelists, committee members, counsel, professionals, or designated U.S. government employees, will not need to submit protective order applications but, under paragraph (b)(5), will have access to the proprietary information at issue under the terms of a protective order issued to the person who employs them.

Paragraph (b)(6) explains that a counsel or a professional who was granted access to proprietary information pursuant to an administrative protective order issued during the underlying Commission proceedings that permits him or her to retain the information during panel review will become subject to additional terms applicable during panel review if he or she retains the information for more than 15 days after a First Request for Panel Review is filed with the Secretariat. Thus, such persons may retain the proprietary information, but under the same terms and subject to the same sanctions as those who have been issued a new protective order following the commencement of the panel review process. This provision in the revised interim rule changes the original interim rule by subjecting persons to the additional requirements of this Subrule at an earlier stage in the panel process. Paragraph (b)(6) also provides for the service of the original protective order and application on persons on the service list maintained by the Commission Secretary during the administrative proceedings, the Commission, the Secretariat, and such other persons as are required to be served with protective orders for proprietary information by the Rules of Procedure.

Subsection (c) requires that, upon the application for a protective order by a panelist, a committee member, the non-clerical staff of a panelist or committee member, a Secretary, any member of the Secretariat staff, or a designated member of the interagency group, the Commission shall issue a protective order.

Subsection (d) provides for the Commission's consideration of protective order applications filed by counsel and professionals. Any objections to an application for a protective order to counsel or professionals must be filed with the Commission within ten days of the date of filing of the application and shall state the reasons why the application should not be granted. The Commission must grant or deny the application within thirty (30) days after receipt of the application. This 30 day requirement was added to these rules to reflect the Commission's duties under the Rules of Procedure.

Subsection (e) requires the Commission to retain in a public file copies of protective orders governed by this subpart, whether issued during the administrative proceeding or during the panel review process. The original interim rules required that persons who are granted new protective orders during a panel review serve those protective orders on the Secretariat and participants. This requirement has been deleted from the revised interim rules because it unnecessarily duplicates service requirements set forth in the Rules of Procedure.

Subsection (f) provides for Commission revocation or modification of a protective order, with upon motion or *sua sponte*. The revised regulations contain an added requirement that the Commission notify the Secretariat of any action to revoke or modify an outstanding protective order in the course of an ongoing panel review.

Section 207.94

This section deals with the release of documents containing privileged information under protective order. The administrative record under review may contain documents for which the Commission claims attorney-client, attorney work product, or government pre-decisional privileges. One reason for classifying documents as privileged is to permit a free and frank exchange between attorney and client, and within an agency. Candor between the Commission and its employees should be encouraged, but could be constrained by the risk of disclosure to a judge or panelist who subsequently reviews the ultimate administrative decision, particularly if the document contains recommendations at odds with that decision. The Court of International Trade, in reviewing Commission determinations under title VII, has not permitted litigants to have access to privileged portions of the record. Both Annex 1901.2 of the Agreement and the Statement of Administrative Action for implementation of the FTA Act specifically contemplate that the Rules of Procedure would make provision for the treatment of privileged information.

Under the Rules of Procedure for binational panel review under Article 1904 of the Agreement, the Commission will not include privileged documents in the copies of the administrative record that are transmitted to the Secretariat for the panel's use, although any documents for which privilege is claimed will be listed in the index of the record. If there are any challenges to the privilege claim, the panel will first examine the affidavits in support of the claim of privilege to determine whether there is a question as to the validity of the claim or if the privilege is qualified and whether the claim meets the criteria generally applied by the federal courts. If the affidavits are not dispositive, then the panelists will select from among themselves two lawyers, one from Canada and one from the United States, to examine in camera and under protective order any document at issue. Only if the two representatives cannot agree whether or not the document should be released under protective order will the decision be referred to the full panel. At that point, the full panel will review the document, in camera, and under protective order, to decide whether to disclose the document under protective order for use in the panel review.

The Rules of Procedure provide that at each stage of consideration of documents containing privileged

information, those documents will be protected by protective orders. In accordance with the process prescribed by the Rules of Procedure, the regulation at § 207.94 provides the mechanics of applications for and issuance of protective orders for privileged information subject to panel review. This regulation provides for the issuance of such protective orders if appropriate under the regulations. The revised regulations permit the Commission to issue protective orders to access to privileged information to the U.S. and Canadian Secretaries and their staffs. Such persons may, in certain circumstances, need access in order to perform their Secretariat functions. The revised regulations have omitted provisions requiring the filing of protective orders issued under this section with the Secretariat. These provisions in the original interim rules unnecessarily duplicated requirements set forth in the Rules of Procedure.

Section 207.100–207.120

The Tariff Act, as amended by section 403(c) of the FTA Act, declares it unlawful for any person to violate, or to induce the violation of, any provision of a protective order issued during panel or committee review. The Commission is authorized to impose sanctions against any person who is found by the Commission to have violated or induced violation of the terms of a protective order issued by the Commission for FTA purposes. These sanctions may include a civil penalty of up to $100,000 for each violation, and other administrative sanctions, including but not limited to debarment from practice before the Commission, as the Commission determines to be appropriate. 19 U.S.C. 1677f(d)(4). Before imposing such sanctions, the Commission must provide notice and an opportunity for a hearing in accordance with section 554 of title 5 of the U.S. Code. *Id.* Any person against whom sanctions are imposed may appeal the Commission's determination to the U.S. Court of International Trade. *Id.* at (d)(5).The Commission may file an action in that court to enforce sanctions assessed. *Id.* at (d)(6).

The regulations contained in §§ 207.100–207.120 address the Commission's procedures for imposing sanctions against persons who have violated, or induced violation of, the provisions of a protective order issued during panel and committee proceedings. For the purposes of the sanctions regulations the term "person", as defined in § 207.91 (the definition section for this subpart), means not only an individual, but also any entity such as a partnership, corporation, association or organization.

In deciding whether to initiate sanctions proceedings and whether to impose sanctions, the Commission will interpret the legislative prohibition against violation or inducement of a violation in a manner that best carries out the spirit of the legislation. Thus, a disclosure can be unintentional and still constitute a violation for which sanctions could be imposed. For example, the failure to delete proprietary information from the public version of a brief or the disclosure of proprietary information during a public hearing would constitute violations, and could subject the responsible person to sanctions, even if the disclosure was unintentional. However, the Commission would not generally view conduct permitting disclosure to a customs official at the U.S./Canada border, i.e., transmitting documents containing proprietary information with knowledge that they may be inspected at the border as sanctionable. Similarly, the Commission would not generally consider a failure to report such a disclosure to be a violation of a protective order.

Nor is actual disclosure of protective proprietary information necessary to support assessment of sanctions. For example, the provisions of a protective order could be deemed violated by carelessness in handling the protected information, as evidenced by loss of the information or by failure to follow the procedures required by the protective order for safeguarding proprietary information. Likewise, sanctions could be assessed for failure to supervise properly the handling of the protected information.

Initiation of a violation is not a necessary element of inducement. This point is expressly stated in the revised regulations at § 207.100(c). A person who has accepted information knowing it is being disclosed in violation of a protective order will be regarded as having induced violation of the provisions of the protective order. For example, if counsel for a client breaches a protective order by relaying a competitor's protected proprietary information to the client, and the client accepts the information, having reason to know that counsel's action is in breach of the protective order, the client could be subject to sanctions for inducing violation of the protective order provisions.

The exmaples contained in the above discussion are intended to serve as guidelines, and do not represent an exhaustive list of circumstances under which the Commission could determine that a person has violated or induced violation of the provisions of a protective order.

Section 207.100

This regulation lists types of sanctions that can be imposed upon a person who is found to have violated or induced the violation of any provision of a protective order. The sanctions include those specifically mentioned in the FTA Act, i.e., civil penalties of up to $100,000 for each violation and debarment from practice before the Commission, as well as some other sanctions that the Commission believes constitute other appropriate administrative sanctions. Also tracking the statutory language, the regulation notes that each day of a continuing violation constitutes a separate violation for the purposes of assessing civil penalties. Sanctions may be imposed against persons other than the one who violated the protective order, such as the firm, partner, associate, employee, employer, or client of that person.

Section 207.101

This regulation sets out the procedures for setting in motion an inquiry into an allegation of violation. Any person who has information indicating that there has been a violation shall report the information to the Commission Secretary. Any such information should be reported immediately upon learning of the possible violation. Upon receipt of the information, the Commission may forward it to the Commission's Office of Unfair Import Investigations ("OUII"). OUII will then conduct an inquiry to determine whether there is reasonable cause to believe that a person or persons have violated or induced the violation of any provisions of a protective order.

Subsection (c) has been amended to provide OUII with the assistance of an administrative law judge if necessary to aid in the obtaining of information during the inquiry stage. The Commission does not anticipate that this procedure will often be necessary, but has, however, provided for the assistance of an administrative law judge in those rare instances where a discovery order may be needed.

Section 207.102

Upon completion of the inquiry, OUII may conclude (1) that there is reasonable cause to believe that there has been a violation or inducement to violate the terms of a protective order; or (2) that there has been no violation or

inducement of violation; or (3) that there is a reasonable cause to believe that there has been an actionable violation, but that the responsible person is outside the Commission's jurisdiction but within the jurisdiction of Canada. If OUII concludes that there has been no violation or inducement of violation, the file will be closed, unless otherwise ordered by the Commission. If OUII reaches another of the possible conclusions, this regulation requires that OUII make a recommendation to the Commission based upon that conclusion. The Commission may take appropriate action regarding the initiation of sanctions proceedings, including rejecting, approving, or approving and amending any recommendation made by OUII.

If the Commission determines that initiation of sanctions proceedings is appropriate, the Commission will direct the Commission Secretary to issue a "change letter" as defined in § 207.103. Issuance of the charging letter will initiate proceedings before a Commission administrative law judge.

If appropriate, the Commission will take the necessary steps to request the authorized agency of Canada to initiate proceedings under Canadian law on the basis of an alleged violation of the protective order. It will be appropriate to take such steps if it is determined that (1) the charged party, while not subject to any of the sanctions set forth under § 207.100, could be subject to sanctions imposed by the authorized agency of Canada; or (2) an authorized agency of Canada would otherwise be the more appropriate forum for the initiation of a proceeding.

The revised regulation addresses a concern that was raised regarding notification to the person whose proprietary information has allegedly been disclosed. This regulation now provides that, at the initiation stage, the Commission may make a determination as to whether it is appropriate to notify the person whose proprietary information allegedly has been disclosed. In some cases, such person will have already received constructive notice of a possible unauthorized disclosure, by virtue of questioning by OUII during its inquiry. In other cases, the person who submitted the proprietary information to the Commission may be unaware of a possible unauthorized disclosure, or of the nature or extent of any disclosure. The Commission will review each case individually to determine whether public policy considerations suggest that it is appropriate to provide the person who submitted the proprietary information with notice about initiation of sanctions proceedings or about particular factual allegations pertinent to the proceedings. In making this determination, the Commission will weigh factors such as the consequences to the submitter of the proprietary information, the impact upon the Commission's future ability to obtain proprietary information, the potential for disruption of an ongoing panel review, and the general need to uphold the integrity of the binational panel process.

Because an inquiry into, and a proceeding involving, an alleged breach of a protective order is a sensitive subject that could harm a person's reputation, the Commission has endeavored to provide to the extent consistent with public policy considerations for confidentiality at the various stages of sanctions proceedings. References to confidentiality occur in several of these sanctions regulations. The Commission is concerned about avoiding the detrimental effects on the reputations of persons that may arise from publicity relating to allegations of protective order violations, and about the impact upon the binational panel process of unsubstantiated allegations against panelists, committee members or the Secretariat staff. At the same time, the Commission recognizes that some disclosures concerning the proceedings and underlying allegations and facts are necessary to the gathering of evidence or otherwise appropriate for public policy reasons. Accordingly, these regulations are designed to allow the Office of Unfair Import Investigations, charged parties and the administrative law judges to develop means in particular cases for accommodating these competing concerns.

At the inquiry stage, the Commission expects that the need for confidentiality will be respected, but must remain consistent with the need to gather information in order to conduct an adequate inquiry. Subsection (d) of § 207.102 reflects this concern, by providing that all aspects of the inquiry will be kept confidential, except as needed to gather relevant evidence, or as the Commission may otherwise direct for public policy reasons. The Office of Unfair Import Investigations in the conduct of its inquiry preliminary to its recommendations to the Commission will endeavor to keep the nature of the allegations and facts gathered confidential. The Office shall not, however, regard this instruction as so restrictive as to limit its investigative efforts insofar as disclosure of such allegations or facts may be necessary for the obtaining of information.

Section 207.103

A person against whom sanctions are proposed will be notified in a charging letter, which will include the allegations, proposed sanctions, and procedures for challenging imposition of sanctions. In order to protect the charged party's privacy, the charging letter will be served in a double envelope, with the inner envelope marked for opening by the addressee only. For good cause, the administrative law judge may amend the charging letter at any time, but an amendment that adds an additional charged party must be approved by the Commission. Nothing in this regulation precludes the Office of Unfair Import Investigations from seeking a separate charging letter to initiate separate proceedings against another person whom it believes should be charged with a violation under this Subpart.

Consistent with state bar disciplinary proceedings and judicial contempt proceedings, the person whose information is alleged to have been released is not a party to the proceedings. The interest being vindicated is that of the Commission in ensuring that all provisions of its protective orders are honored.

Section 207.104

This regulation sets forth the filing time, form and content for a response to a charging letter. If the Commission issues a charging letter, it will transmit the letter confidentially to the charged party and provide for notice of the proceedings to become public pending the charged party's submission of a response to the charging letter. If the charged party desires that confidentiality restrictions be placed on the proceedings, the charged party must so state in the response to the charging letter.

Section 207.105

This regulation addresses the Commission's confidentiality concerns with respect to the actual sanctions proceedings. The provisions of the regulation are twofold. First, with respect to proprietary and certain privileged information that is necessary for the defense of the allegations, counsel for the charged party may be granted access to this information under protective order. The only privileged information that can be released under this section is privileged information the disclosure of which is the subject of the sanctions proceedings.

Second, upon the request (in the response to the charging letter) of any charged party, the proceedings will be kept confidential to the extent practical

and permitted by law. If a request for confidentiality appears in the response, the administrative law judge shall enter an order to maintain the confidentiality of information relating to allegations of violation of a protective order to the extent practicable consistent with the needs of the parties in conducting the proceedings. The regulations leave the form of such an order to the sound discretion of the administrative law judges, who may for example take into account whether certain facts are particularly sensitive to the charged party and who shall assure that confidentiality orders do not unnecessarily impede efforts to conduct discovery or to gather relevant information.

Section 207.106

Interim measures may be imposed by the Commission if necessary. For example, a person whom the Commission has reason to believe is continuing to unlawfully disclose protected proprietary information may still have access to proprietary information pursuant to an outstanding protective order. In order to curtail possible further unlawful disclosure by that person, the Commission may determine that it is necessary to revoke the outstanding protective order without waiting for the completion of the sanctions proceedings, by which time irreparable damage may have been caused by continued disclosure of proprietary information.

As another example, in some circumstances it may be appropriate not to make efforts to maintain the confidentiality of allegations and facts concerning alleged protective order violations or to allow some disclosures of such allegations that would otherwise not be permitted. For instance, in some cases it may be possible that the inquiry or discovery has not required OUII to contact the company whose proprietary information allegedly has been disclosed unlawfully, or that OUII has not had to notify the company of details about the allegations. Nevertheless, the alleged disclosure may be such that it could lead to such serious consequences that prevention or mitigation of harm to the company whose information has been put at risk may outweigh the interests of confidentiality. The regulations specify that disclosure of information that would otherwise be kept confidential during the proceedings is among the interim measures that the administrative law judge may recommend to the Commission.

Notice and an opportunity to respond will be provided to a party against whom interim measures are proposed. The administrative law judge will issue a recommended determination (RD) as expeditiously as possible, generally within twenty days of the filing of the motion. The Commission will review the RD and issue its determination on interim measures usually within twenty days from issuance of the RD. Interim measures may be revoked at any time.

Section 207.107

This regulation sets forth the requirements for motions and responses to motions.

Section 207.108

This regulation provides for a preliminary conference to consider such matters as a discovery schedule and the confidentiality of the proceedings.

Section 207.109

This regulation provides for discovery under such terms as the administrative law judge may order. Voluntary discovery is encouraged.

A party desiring to depose or obtain nonprivileged documents from a Commission employee can file a motion requesting the administrative law judge to recommend that the Commission direct that employee to testify or produce the requested materials. A party desiring to depose or obtain nonprivileged information from an employee of another U.S. agency or of a Canadian agency, can file a motion requesting the administration law judge to recommend that the Commission seek the testimony or production of requested material from that person.

Section 207.110

This regulation provides for issuance of a subpoena by the administrative law judge, upon the application of a party. Subpoenas issued under this subpart will be enforced by the Commission. The authority to issue and enforce subpoenas for these proceedings is provided by section 403(c) of the FTA Act. If a party files a motion for enforcement of a subpoena, the regulation provides for the administrative law judge to recommend to the Commission in favor of or against enforcement. In the recommendation, the administrative law judges must address each of the criteria necessary for enforcement of an administrative subpoena, as established by relevant case law.

Section 207.111

This regulation provides for a pre-hearing conference.

Section 207.112

Under this regulation, an opportunity for a hearing must be provided for all sanctions proceedings. Consistent with the legislative mandate of the Tariff Act as amended by section 403(c) of the FTA Act, the administrative law judge is directed to conduct a hearing that complies with section 554 of the Administrative Protective Act.

Section 207.113

This regulation defines the administrative record for sanctions proceedings.

Section 207.114

Within the time frame established by this regulation, the administrative law judge will issue an initial determination, which contains his findings and conclusions necessary to the factual and legal issues presented. In the usual case, the initial determination will be issued within ninety days of issuance of the charging letter. If the judge determines that the case is complicated, he may issue his initial determination within 120 days of the charging letter.

The Commission anticipates that the deadlines set out in this regulation can be met in most sanctions proceedings. If necessary, however, the administrative law judge may request the Commission to extend the time for issuance of an initial determination when discovery has been delayed as a result of the Commission's efforts to compel an employee or official of another United States agency, or of a Canadian agency, to respond to a deposition, or as a result of the Commission's efforts to enforce a subpoena, or when more time is needed to assure a complete record or to avoid manifest injustice.

Subsection (c) has been added to address burden of proof. The original interim rules did not specify the burden of proof to be applied in the sanctions proceedings. The revised rule adopts the burden of proof requirement that would apply under existing case law. Under this regulation, there must be a showing of clear and convincing evidence to support a finding of violation or inducement of violation.

In the typical administrative case, the party bringing the action must prove its allegations only by a "preponderance of the evidence." *See Collins Securities Corp.* v. *Securities and Exchange Commission*, 562 F.2d 820, 823 (D.C. Cir. 1977); *Securities and Exchange Commission* v. *Savoy Industries*, 587 F.2d 1149 (D.C. Cir. 1978), *cert. denied*, 440 U.S. 913 (1979). On the other end of the spectrum, in criminal cases the interests of the defendant are so great

that the state must prove the guilt of the accused "beyond a reasonable doubt." *SSIH Equipment S.A.* v. *U.S. International Trade Commission*, 718 F.2d 365, 380 (Fed. Cir. 1983) (additional views of Nies, J.). The courts also have developed an intermediate standard generally governing administrative or civil cases in which the defendant is accused of fraud or other quasi-criminal wrongdoing, and therefore stands at risk of having his reputation tarnished; in these cases, the courts usually have applied a "clear and convincing evidence" standard. *SSIH Equipment S.A.*, 718 F.2d at 380–81. *See Collins Securities Corp.* and cases cited therein, 562 F.2d 824 & n. 27; *Klein* v. *Peterson*, 866 F.2d 412 (Fed. Cir. 1989).

The sanctions proceedings set out in these regulations fall within the category of civil or administrative cases which could affect the charged party's reputation or ability to practice his profession. Accordingly, the regulations impose a "clear and convincing" standard. Application of a "clear and convincing evidence" burden will require a higher degree of proof than "preponderance of the evidence," but by a somewhat lesser degree of proof than "beyond a reasonable doubt." *See Collins Securities Corp.*, 562 F.2d at 824.

Section 207.115

A party may request the Commission to review the administrative law judge's initial determination by filing a petition for review within fourteen days after the date the initial determination is served upon the charged party. This regulation sets out the requirements for such petition and any response. The Commission will rule on the petition within forty-five days of the date the initial determination is served. The revised regulations have added a provision to this section providing that no person can obtain judicial review of an initial determination imposing sanctions without first filing a petition for Commission review. This change is consistent with the general administrative law principle that a party may be required to exhaust its administrative remedies before seeking judicial review of an agency's determination.

Section 207.116

Absent a petition for review, the Commission may decide *sua sponte* to review an initial determination. This regulation provides for such review when at least one of the participating Commissioners votes for ordering review *sua sponte* within forty-five days of the date the initial determination is served.

Section 207.117

On review, the parties may present argument only on the issues for which review has been ordered. The Commission may take any appropriate action in reviewing the initial determination, including remand.

Section 207.118

In panel review proceedings in which a final antidumping or countervailing duty determination issued by the Commission is being challenged, the Commission will be represented by the Commission's General Counsel. In the usual case, three attorneys from the General Counsel's Office will participate in the representation of the Commission before the panel—the General Counsel; the Assistant General Counsel for Litigation; and a staff attorney. In some instances, a sanctions proceeding will be initiated while the panel review for which the protective order was issued is still pending. If a participant, counsel for a participant, or a panelist involved in an ongoing panel review is charged with breaching a protective order issued during that panel review, the outcome of the sanctions proceeding, as well as the issuance of interim measures (such as revocation of the protective order) during the sanctions proceeding, could affect the ongoing panel review. In order to avoid the appearance of impropriety in such instances, the General Counsel and any other attorneys in the General Counsel's office who are participating in the panel review will not play a role in advising the Commission in matters regarding the relevant sanctions proceedings. Nor will the Assistant Counsel for title VII cases or any other attorney who participated in the underlying administrative proceedings advise the Commission in sanctions proceedings involving breach of a protective order involving on ongoing panel review of the Commission's determination in those proceedings. In such instances, the Assistant General Counsel for Section 337 investigations, who will have played no role in the panel review or underlying investigation, will serve as Acting General Counsel for the purpose of advising the Commission in regard to the sanctions proceedings, and will work with General Counsel staff attorneys who have not so participated.

Section 207.119

This regulation provides for the filing of a petition for reconsideration of a Commission determination. Any such petition must be filed within fourteen days after service of the determination. No responses will be accepted unless requested by the Commission, but the Commission will not grant a petition for reconsideration without first providing an opportunity for response.

Section 207.120

If the Commission's final determination, after the period for reconsideration has run, is that public sanctions are to be imposed, the Commission will publish such determination in the **Federal Register.** The Commission will also notify whichever departments and agencies of the Canadian and United States governments are likely to have an interest in the matter, for example, the U.S. Commerce Department and the U.S. Trade Representative.

The original interim rules prohibited interlocutory appeals. We have deleted this prohibition from the revised rules. The appropriateness of certifying a particular question for interlocutory appeal will be left to the discretion of the administrative law judge. The Commission will have the discretion to grant or deny a request for review of a question that has been so certified.

List of Subjects in 19 CFR Part 207

Administrative practice and procedure, Antidumping, Canada, Countervailing duty, Imports, Trade agreements.

For the reasons set forth in the preamble, 19 CFR part 207, Subpart G is revised to read as follows:

SUBPART G—IMPLEMENTING REGULATIONS FOR THE UNITED STATES-CANADA FREE-TRADE AGREEMENT

Sec.

207.90 Scope.
207.91 Definitions.
207.92 Procedures for commencing review of final determinations.
207.93 Protection of proprietary information during panel and committee proceedings.
207.94 Protection of privileged information during panel and committee proceedings.

Procedures for imposing sanctions for violation of the provisions of a protective order issued during panel and committee proceedings

207.100 Sanctions.
207.101 Reporting of violation and commencement of investigation.
207.102 Initiation of proceedings.
207.103 Charging letter.
207.104 Response to charging letter.
207.105 Confidentiality.
207.106 Interim measures.
207.107 Motions.
207.108 Preliminary conference.
207.109 Discovery.
207.110 Subpoenas.

207.111 Prehearing conference.
207.112 Hearings.
207.113 The record.
207.114 Initial determination.
207.115 Petition for review.
207.116 Commission review on its own motion.
207.117 Review by Commission.
207.118 Role of the General Counsel in advising the Commission.
207.119 Reconsideration.
207.120 Public notice of sanctions.

Subpart G—Implementing Regulations for the United States-Free Trade Agreement

Authority: Sec. 777 of the Tariff Act of 1930, as amended; secs. 403, 405(d) of the United States-Canada Free-Trade Agreement Implementation Act of 1988 (102 Stat. 1851, Pub. L. No. 100-449, Sept. 28, 1988); 19 U.S.C. § 1335.

§ 207.90 Scope.

This subpart sets forth the procedures and regulations for implementation of Article 1904 of the United States-Canada Free Trade Agreement under the Tariff Act of 1930, as amended by Title IV of the United States-Canada Free-Trade Agreement Implementation Act of 1988 (19 U.S.C. 1516a and 1677f). These regulations are authorized by section 405(d) of the United States-Canada Free-Trade Agreement Implementation Act of 1988 and 19 U.S.C. 1335.

§ 207.91 Definitions.

As used in this subpart—

Administrative Law Judge means the United States Government employee appointed under section 3105 of Title 5 of the United States Code to conduct proceedings under this part in accordance with sections 556 and 557 of the United States Code;

Agreement means the Free Trade Agreement between Canada and the United States of America entered into between the Government of Canada and the Government of the United States of America and signed on January 2, 1988;

Article 1904 Rules means the Rules of Procedure for Article 1904 Binational Panel Reviews adopted by the United States of America and Canada pursuant to the agreement;

Canadian Secretary means the Secretary of the Canadian section of the Secretariat and includes any person authorized to act on his behalf;

Charged party means, for the purposes of § 207.100, a person who is charged by the United States International Trade Commission with violating or inducing violation of a provision of a protective order;

Clerical person means, for purposes of § 207.93, a person who provides support services to a panelist, committee member, counsel, professional, or member of the interagency group appointed by the United States Trade Representative. This definition includes, but is not limited to, secretaries, paralegals, and law clerks.

Commission means the United States International Trade Commission;

Commission Secretary means the Secretary to the Commission;

Complaint means the complaint referred to in the Article 1904 Rules;

Counsel means, for purposes of § 207.93, persons described in the definition of "counsel of record" in Rule 3 of the Article 1904 Rules, and counsel for an interested person who plans to file a timely Complaint or Notice of Appearance in the panel review.

Date of Service means, for the purposes of § 207.100 only, the day a document is deposited in the mail or delivered in person;

Days means calendar days, except that a deadline which falls on a weekend or United States federal holiday shall be extended to the next working day;

Extraordinary challenge committee means the committee established pursuant to Annex 1904.13 of the Agreement and section 407 of the FTA Act to review decisions of a panel or conduct of a panelist;

Final determination, for the purposes of § 207.92, shall have the meaning assigned to the term "final determination" by Article 1911 of the agreement;

FTA Act means the United States-Canada Free-Trade Implementation Act of 1988, Pub. L. No. 100-449 (Sept. 28, 1988);

Investigative attorney means the attorney(s) designated by the Office of Unfair Import Investigations to engage in inquiries and investigatory activities with respect to investigations and proceedings under § 1907.100 of title 19 of the Code of Federal Regulations;

Notice of Appearance means the notice of appearance provided for by the Article 1904 Rules;

Panel review means review of a final determination pursuant to chapter 19 of the Agreement, including review by an extraordinary challenge committee;

Parties means, for the purposes of §§ 207.100–207.120, the investigative attorney and the persons charged in an action under §§ 207.100–207.120 of this subpart;

Person means, for the purposes of §§ 207.100–207.120, an individual, partnership, corporation, association, organization, or other entity;

Privileged information means all information as to which the Commission claims privilege or has reserved a claim of privilege in accordance with Article 1904.14 of the Agreement and the Article 1904 Rules;

Professional means, for purposes of § 207.93, an accountant, economist, engineer, or other non-legal specialist who is acting on behalf of a participant in a panel review or an interested person who plans to become a participant, and who is under the direction and control of counsel for that participant or interested person.

Proprietary information means all information designated or treated by the United States International Trade Commission as confidential or business proprietary under 19 U.S.C. 1677f and 19 CFR 201.6.

Protective Order means a protective order issued by the Commission;

Secretariat means the Secretariat established pursuant to Article 1909 of the Agreement and includes the Secretariat sections located in both Canada and the United States.

United States Secretary means the Secretary of the United States section of the Secretariat and includes any person authorized to act on his behalf;

Except as otherwise provided in this subpart, the definitions set forth in the Article 1904 Rules are applicable to this Subpart and to any protective orders issued pursuant to this Subpart.

§ 207.92 Procedures for commencing review of final determinations.

(a) *Notice of Intent to Commence Judicial Review.* A Notice of Intent to Commence Judicial Review shall contain such information, and be in such form, manner, and style, including service requirements, as prescribed by the Department of Commerce in its regulations at 19 CFR part 356.

(b) *Request for Panel Review.* A Request for Panel Review shall contain such information, and be in such form, manner, and style, including service requirements, as prescribed by the Department of Commerce in its regulations at 19 CFR part 356.

§ 207.93 Protection of Proprietary Information During Panel and Committee Proceedings.

(a) *Persons Authorized to Receive Proprietary Information Under Protective Order.* The following persons may be authorized by the Commission to receive access to proprietary information if they comply with these regulations and such other conditions imposed upon them by the Commission:

(1) The members of a binational panel or an extraordinary challenge committee, and their non-clerical staffs;

(2) Counsel, as defined in § 207.91, provided that the counsel do not participate in competitive decision-making activity for the person represented or for any person that would gain a competitive advantage through knowledge of the proprietary information sought;

(3) Professionals, as defined in § 207.91, provided that they do not participate in competitive decision-making activity for the person represented or for any person that would gain a competitive advantage through knowledge of the proprietary information sought;

(4) Clerical persons, as defined in § 207.91, who are employed or retained by and under the direction and control of a person described in (a) (1), (2), (3) or (6) who has been issued a protective order, if such clerical persons:

(i) Are not involved in the competitive decision-making, or the support functions for the competitive decision-making, of a participant to the proceeding or of any person that would gain a competitive advantage through knowledge of the proprietary information sought, and

(ii) Have agreed to be bound by the terms set forth in the application for protective order of the person who retains or employs him or her;

(5) The Secretaries of the United States and Canadian sections of the Secretariat and persons retained or employed by the Secretaries, including court reporters hired by the Secretariat to transcribe panel reviews;

(6) Such persons who the United States Trade Representative informs the Commission require access to proprietary information solely for the purpose of evaluating whether the United States should seek an extraordinary challenge committee review of a panel decision or of the conduct of a panelist during panel review.

(b) *Procedures for Obtaining Access to Proprietary Information under Protective Order.*—(1) *Persons Who Must File An Application for Release Under Protective Order.*

In order to be permitted access to proprietary information in the administrative record of a determination under review by a panel, all persons described in paragraphs (a) (1), (2), (3), (5) or (6), unless described in (b)(6) of this section, shall file an original and six (6) copies of an application for release under protective order with the Commission Secretary.

(2) *Contents of Applications for Release Under Protective Order.* (i) The Commission Secretary shall adopt from time to time forms for submitting requests for release pursuant to protective order that incorporate the terms of this rule.

(ii) Such forms shall require the applicant for release of proprietary information under protective order to submit a personal sworn statement that, in addition to such other conditions as the Commission Secretary may require, the applicant will:

(A) Not disclose any proprietary information obtained under protective order to any person other than

(*1*) Personnel of the Commission involved in the particular panel review in which the proprietary information is part of the administrative record,

(*2*) The person from whom the information was obtained,

(*3*) A person who is authorized to have access to the same proprietary information pursuant to a Commission protective order, and

(*4*) A clerical person retained or employed by and under the direction and control of a person described in (a) (1), (2), (3), or (6) who has been issued a protective order if such clerical person

(*i*) Is not involved in the competitive decision-making, or the support functions for the competitive decision-making, of a participant to the proceeding or of any person that would gain a competitive advantage through knowledge of the proprietary information sought, and

(*ii*) Has agreed to be bound by the terms set forth in the application for protective order of the person who retains or employs him or her.

(B) Not use any of the proprietary information released under protective order for purposes other than the particular proceedings under Article 1904 of the Agreement;

(C) Upon completion of the panel review, or at such other date as may be determined by the Commission,

(*1*) If a person described in § 207.93(a)(1), return to the United States Secretary or certify to the Commission Secretary the destruction of; or

(*2*) If a person described in § 207.93(a) (2), (3), (5) or (6), return to the Commission or certify to the Commission the destruction of

all documents released under the protective order, and all other materials, such as notes or charts, based on or containing any proprietary information released under the protective order;

(D) Update factual representations made in his or her application for protective order to the extent and in the manner required by the terms of the protective order issued granting that application; and

(E) Acknowledge that the person becomes subject to the provisions of section 403(c) of the FTA Act and 19 CFR 207.100 as well as (except for persons described in § 207.93(a)(6)), section 77.26 of Canada's Special Import Measures Act, as amended, with respect to the imposition of sanctions for violation of the protective order.

(3) *Timing of Applications.* The United States and Canadian Secretaries and any person retained or employed by them may file an application at any time. Any panelist, or committee member, or member of their non-clerical staffs, counsel, or professional, may file an application for disclosure under protective order after a Notice of Request for Panel Review has been filed with the Secretariat. A person described in § 207.93(a)(6) may file an application when the United States Trade Representative notifies the Commission that such person requires access to the proprietary information.

(4) *Service of Applications.* (i) If a person described in paragraphs (a) (1), (2), or (3) files an application for a protective order before the date on which notices of appearance must be filed in the panel review, such person shall concurrently serve one (1) copy of such application upon each person listed on the service list maintained by the Commission during the administrative proceeding and on such other persons as are required by the Article 1904 Rules to be served by the applicant. If the application is filed after the deadline for notices of appearance, such person shall serve the application upon each person who files a complaint or notice of appearance in the panel review and on such other persons as are required by the Article 1904 Rules to be served by the applicant.

(ii) *Method of Service.* Service of an application may be effected by

(A) personal service, or

(B) sending a copy of the document by facsimile, Express Mail, or expedited courier service.

(5) *Release to Clerical Staff of Panelists, Committee Members, Counsel, Professionals, and designated U.S. Government Employees.* A clerical person described in § 207.93(a)(4) may be provided with access to proprietary information disclosed under protective order to the person who employs or retains him or her, if such clerical person has agreed to the terms of the protective order issued to the person who employs or retains him or her, by signing and dating a completed copy of the application for protective order of the person who employs or retains him or her where indicated in that application.

The person to whom the protective order has been issued shall file the signed and dated application with the Commission Secretary in accordance with paragraph (b)(1).

(6) *Persons who Retain Access to Proprietary Information under a Protective Order Issued during the Administrative Proceeding.* (i) If counsel or a professional has been granted access in an administrative proceeding to proprietary information under a protective order that contains a provision governing continued access to that information during panel review, and that counsel or professional retains the proprietary information more than fifteen (15) days after a First Request for Panel Review is filed with the Secretariat, that counsel or professional, and his or her clerical persons with access on or after that date, becomes immediately subject to the terms and conditions of protective orders issued pursuant to this Subpart, including provisions regarding sanctions for violations thereof.

(ii) Any person described in paragraph (b)(6)(i) of this section, concurrent with the filing of a complaint or notice of appearance in the panel review on behalf of the participant represented by such person, shall:

(A) File four (4) copies of the original application, all existing updates to that application, and the protective order with the United States Secretary; and

(B) Serve seven (7) copies of the protective order, and all existing updates upon the Commission.

(iii) Any person described in paragraph (b)(6)(i) of this section who updates his or her application during the pendency of a panel review shall immediately:

(A) File an original and six (6) copies of the updates with the Commission;

(B) Serve a copy of such updates upon all participants in the panel review; and

(C) File four (4) copies of the updates with the United States Secretary.

(c) *Issuance of Protective Orders to Panelists, Committee Members, non-clerical staffs of Panelists or Committee Members, Secretariat staffs, and designated U.S. Government Employees.* (1) The Commission shall, within thirty (30) days of receipt of the application issue a protective order permitting the release of proprietary information to a person described in §§ 207.93(a) (1), (5) or (6), who has filed an application for protective order under this Subpart.

(2) A panelist shall be issued two (2) copies of any protective order authorizing access to proprietary information. The panelist shall sign both copies of the order and return one (1) to the Commission.

(d) *Issuance of Protective Orders to Counsel and Professionals.*—(1) *Opportunity to object.* The Commission shall not rule on an application filed by a person described in § 207.93(a) (2) or (3) until ten (10) days after the request is filed unless there is a compelling need to rule more expeditiously. Unless the Commission has indicated otherwise, any person may file an objection to the application within seven (7) days of the application's filing date. Any such objection shall state the specific reasons why the application should not be granted. One (1) copy of the objection shall be served on the applicant and on all persons who were served with the application. Service shall be by facsimile, Express Mail or by an expedited courier service. Any reply to an objection will be considered if it is filed before the Commission renders a decision.

(2) *Approval of the Application.* If appropriate, the Commission shall, within thirty (30) days of the receipt of the application, issue a protective order permitting the release of proprietary information to the applicant.

(3) *Denial of the Application.* If the Commission denies an application, it shall, within thirty (30) days of the receipt of the application, issue a letter notifying the applicant of its decision and the reasons therefor.

(e) *Retention of Protective Orders.* The Commission Secretary shall retain, in a public file, copies of applications granted, including any updates thereto, and protective orders issued under this section, and of any protective orders filed in accordance with paragraph (b)(6)(ii) of this section.

(f) *Filing and Service of Updates To Granted Applications.* Any person described in § 207.93(a) (1), (2), or (3) who has been issued a protective order under section 207.93 (c) or (d) shall

(1) File an original and six (6) copies of any submissions updating his or her application for protective order with the Commission Secretary;

(2) Serve such updates upon all participants in the panel review; and

(3) File four (4) copies of such updates with the United States Secretary.

(g) *Modification or Revocation of Protective Orders.* (1) If any person believes that changed conditions of fact or law, or the public interest, may require that a protective order effective under this section be modified or revoked, in whole or in part, such person may file with the Commission a request for such relief. The Commission may consider such action *sua sponte*. The request shall state the changes desired and the changed circumstances warranting such action, and shall include materials and arguments in support thereof. Unless the request is self-initiated, the person filing the request shall serve a copy of the request upon the person to whom the protective order was issued.

(2) Upon receiving a request, the Commission shall either

(i) Provisionally accept the request or

(ii) Reject the request.

The Commission shall treat a self-initiated action as a provisionally accepted request. Any person may file a response to the request within twenty (20) days after the request is filed unless the Commission issues a notice indicating otherwise. After consideration of the request and any responses thereto, the Commission shall take such action as it deems appropriate. If the Commission takes any action that revokes or modifies an outstanding protective order in the course of an ongoing panel review, the Commission Secretary shall immediately notify the Secretariat of such action.

(3) If a request filed under this paragraph alleges that a person is violating the terms of a protective order, the Commission may, in addition to, or in lieu of, provisional acceptance or rejection under the subparagraph, treat the request as a report of violation under § 207.101 of this subpart.

§ 207.94 Protection of Privileged Information During Panel and Committee Proceedings.

(a) *Persons Who May Apply for Access to Privileged Information Under Protective Order.* (1) *Panelists.* If a panel determines that, pursuant to the Article 1904 Rules, *in camera* examination of a document containing privileged information in the administrative record of a final determination that is under panel review is necessary in order for the panel to determine whether the information should be disclosed under a Protective Order for Privileged Information, the Commission shall, upon application, issue two (2) copies of the protective order authorizing the release of the privileged information to the authorized panelists. Panelists shall sign both copies of the Protective Order for Privileged Information and return one (1) to the Commission.

(2) *Persons Designated by the Panel.* Any counsel for a participant, professional under the direction and control of a counsel for a participant, or member of a panelist's non-clerical staff, may file with the Commission an application for release under Protective Order for Privileged Information with

the Commission if a decision is made in accordance with the Article 1904 Rules that disclosure to that person of a document containing privileged information is appropriate. Upon such application, the Commission shall issue a Protective Order for Privileged Information.

(3) *Secretariat Staff.* If a decision is made in accordance with the Article 1904 Rules that disclosure of a document containing privileged information is appropriate, the Secretaries of the United States and Canadian sections of the Secretariat and persons retained or employed by the Secretaries may file with the Commission an application for release under Protective Order for Privileged Information with the Commission. Upon such application, the Commission shall issue the Protective Order.

(4) *Designated Officers or Employees of the United States Government.* If, in the course of a panel review, the panel has reviewed privileged information under a Protective Order for Privileged Information and the privileged information related to issues which affect a decision whether to request an Extraordinary Challenge Committee, the Commission shall, upon application, issue a Protective Order for Privileged Information and release such privileged information to those officials of the United States government designated by the United States Trade Representative as being necessary for the evaluation of whether the United States should, pursuant to the Agreement, convene an extraordinary challenge committee.

(5) *Members of an Extraordinary Challenge Committee.* Upon application, the Commission shall issue a Protective Order for Privileged Information to members of an extraordinary challenge committee authorizing the release of privileged information that:

(i) Is part of the extraordinary challenge committee record, as defined in the Rules of Procedure for Article 1904 Extraordinary Challenge Committees; and

(ii) Was covered under a Protective Order for Privileged Information issued by the Commission during panel review.

(6) *Clerical Persons.* Clerical persons, such as paralegals, law clerks, and secretaries, who are retained or employed by and under the direction and control of a person described in § 207.94(a) (1), (2), (4), or (5) who has been issued a Protective Order for Privileged Information, may obtain access to privileged information if such clerical persons have agreed to be bound by the terms set forth in the application for Protective Order of the person who employs or retains him or her.

(b) *Contents of Applications for Release Under Protective Order for Privileged Information.* (1) The Commission Secretary shall adopt from time to time forms for submitting requests for release pursuant to a Protective Order for Privileged Information that incorporate the terms of this rule.

(2) Such forms shall require the applicant for release of privileged information under Protective Order for Privileged Information to submit a personal sworn statement stating, in addition to such other conditions as the Secretary of the Commission may require, that the applicant will:

(i) Not disclose any privileged information obtained under Protective Order to any person other than

(A) Personnel of the Commission involved in the particular panel review in which the privileged information is part of the record;

(B) A person who been issued a similar Protective Order for Privileged Information concerning the privileged information at issue; and

(C) A clerical person, such as a paralegal, law clerk, or secretary, employed or retained by and under the direction and control of a person described in § 207.94(a) (1), (2), (4) or (5) who has been issued a Protective Order for Privileged Information, if such clerical person has agreed to be bound by the terms set forth in the application for Protective Order for Privileged Information of the person who employs or retains him or her by signing and dating the completed application of that person where indicated in that application.

(ii) Use such information solely for the purposes of proceedings under Article 1904 of the Agreement;

(iii) Upon completion of panel review, or at such other date as may be determined by the Commission,

(A) If a person described in § 207.93(a)(1), return to the United States Secretary or certify to the United States Secretary the destruction of; or

(B) If a person described in § 207.93(a) (2), (3), (5) or (6), return to the Commission or certify to the Commission the destruction of all documents released under the protective order, and all other materials, such as notes or charts, based on or containing the privileged information released under the protective order;

(iv) Acknowledge that sanctions, under section 403(c) of the FTA Act and 19 CFR 207.100, as well as, unless a person described in § 207.94(a)(4), under § 77.26 of Canada's Special Import Measures Act, as amended, may be imposed for violation of the Protective Order.

Procedures for Imposing Sanctions for Violation of the Provisions of a Protective Order Issued During Panel and Committee Proceedings.

§ 207.100 Sanctions.

(a) A person who is determined under this Subpart to have violated or induced the violation of any provision of a protective order issued pursuant to this Subpart, may be subject to one or more of the following sanctions:

(1) A civil penalty not to exceed $100,000 for each violation. Each day of a continuing violation shall constitute a separate violation;

(2) Debarment from practice in any capacity before the Commission for a designated time period following publication of a determination that the protective order has been breached;

(3) Denial of further access to proprietary or privileged information covered by the breached protective order or to proprietary information in future Commission proceedings;

(4) An official reprimand by the Commission;

(5) In the case of an attorney, accountant, or other professional, referral of the facts underlying the violation to the ethics panel or other disciplinary body of the appropriate professional association or licensing authority;

(6) When appropriate, referral of the facts underlying the violation to the United States Trade Representative or his designees, or to another government agency; and

(7) Any other administrative sanctions as the Commission determines to be appropriate.

(b) The partners, associates, employer, and employees of any person who has violated or induced the violation of any provision of a protective order issued pursuant to this subpart, may be subject to any sanctions included in paragraph (a) of this section as the Commission determines to be appropriate.

(c) For the purposes of this subpart, inducement includes the willing acceptance of proprietary or privileged information knowing that such information was obtained in breach of a protective order.

§ 207.101 Reporting of violation and commencement of investigation.

(a) Any person who has information indicating that the terms of a protective order have been violated shall

immediately report all pertinent facts relating thereto to the Commission Secretary.

(b) Upon receipt of this information, the Commission Secretary shall record the information and assign an investigation number, and shall then forward all information he or she has received to the Office of Unfair Import Investigations.

(c) As expeditiously as possible, the Office of Unfair Import Inestigations shall conduct an inquiry to determine whether there is reasonable cause to believe that a person or persons have violated any provision of a protective order. At any time, the Office of Unfair Import Investigations may request that the Commission assign an administrative law judge to oversee the inquiry.

(d) At the conclusion of the inquiry, the Office of Unfair Import Investigations shall assess whether or not the available information is sufficient to provide reasonable cause to believe that a person or persons have violated or induced violation of the provisions of a protective order.

§ 207.102 Initiation of proceedings.

(a) Upon completion of the inquiry,

(1) If the Office of Unfair Import Investigations concludes that there is not reasonable cause to believe that a person or persons have violated or induced violation of the provisions of a protective order,

(i) The Office of Unfair Import Investigations shall submit a report to the Commission; and

(ii) Unless the Commission directs otherwise, the file shall be closed and returned to the Commission Secretary.

(2) If the Office of Unfair Import Investigations concludes that there is reasonable cause to believe that a person or persons have violated or induced violation of the provisions of a protective order, the Office of Unfair Import Investigations shall

(i) Make a recommendation to the Commission regarding whether and to what extent it is appropriate to notify the person whose proprietary information may have been compromised; and

(ii) Submit a report and recommendation to the Commission regarding whether to initiate sanctions proceedings or take other appropriate action.

(b) The Commission may make any appropriate determination regarding the initiation of sanctions proceedings, including rejecting, approving, or approving and amending any recommendation made by OUII.

(c) If the Commission determines that it is appropriate to issue a charging letter, the Commission Secretary shall initiate a proceeding under this Subpart by issuing a charging letter as set forth in § 207.103.

(d) If the Commission determines that it is appropriate to initiate proceedings, but that the party to be charged is beyond the jurisdiction of the Commission and within the jurisdiction of Canada, or that for other reasons an authorized agency of Canada would be the more appropriate forum for initation of a proceeding, the Commission shall take the necessary steps for issuance of a letter requesting the authorized agency of Canada to initiate proceedings under Canadian law on the basis of an alleged violation of the protective order.

(e) The Commission may make any determination regarding notification about the alleged breach and the relevant underlying facts to the person who submitted the proprietary information that allegedly has been disclosed. A determination by the Commission on this subject does not foreclose the administrative law judge from redetermining at any time during the hearing whether notification to the compromised party is appropriate.

(f) If the Commission determines that it is not appropriate to issue a charging letter or to refer the facts to the authorized agency of Canada, the file shall be closed and returned to the Commission Secretary, unless the Commission directs otherwise.

(g) Confidentiality. Except as deemed reasonably necessary by the Office of Unfair Import Investigations to gather relevant information and to protect the interests of the person who submitted the proprietary information, all aspects of the inquiry shall remain confidential, unless otherwise ordered by the Commission. Except as the Commission may otherwise order, the Commission Secretary shall maintain all closed investigatory files in confidence to the extent permitted by law, and shall destroy any documentary evidence containing allegations of breach for which no proceeding is initiated one year after the file is closed.

§ 207.103 Charging letter.

(a) *Contents of charging letter.* Each charged party shall be served by the Commission with a copy of a charging letter and any accompanying motion for interim measures, as provided for in § 207.106. The charging letter shall include:

(1) Allegations that the provisions of a protective order have been violated and the basis thereof;

(2) A citation to § 207.100 of this subpart, for a listing of sanctions that may be imposed for breach of a protective order;

(3) A statement that a proceeding has been initiated and that an APA hearing will be held before an administirative law judge;

(4) A statement that, the charged party or his counsel may request the issuance of an appropriate administrative protective order to obtain access to the information upon which the charge is based;

(5) A statement that charged party has a right to retain counsel at the charged party's own expense for purposes of representation; and

(6) A statement that the charged party has the right to request in the response described in § 207.104 of this subpart that the proceedings remain confidential to the extent practicable.

(b) *Service of charging letter.* (1) The charging letter shall be served in a double envelope. The inner envelope shall indicate that it is to be opened only by the addressee. Service of a charging letter shall be made by one of the following methods:

(i) Mailing a copy by registered or certified mail addressed to the charged party at the party's last known permanent address; or

(ii) Personal service; or

(iii) Any other method acceptable under Rule 4 of the Federal Rules of Civil Procedure.

(2) Service shall be evidenced by a certificate of service signed by the person making such service.

(c) *Confidentiality of charging letter.* Prior to entry of an order by the administrative law judge under § 207.105, the charging letter will be confidential and disclosed only to necessary Commission staff and the charged parties.

(d) *Amendment of charging letter.* (1) At any time after proceedings have been initiated, the investigative attorney may move for leave to amend or withdraw the charging letter.

(2) *Amendment to include additional parties.* If the administrative law judge determines that the charging letter should be amended to include additional parties, he shall issue a recommended determination to that effect. The Commission shall review the recommended determination, and issue a determination granting or denying the motion to amend the charging letter to include additional parties.

(3) *Other amendments.* Upon motion, the administrative law judge may grant leave to amend the charging letter for good cause shown upon such conditions

as are necessary to avoid prejudicing the public interest and the rights of the originally-charged parties or parties added to the charging letter.

(4) Any amended charging letter shall be served upon all charged parties in the form and manner set forth in paragraphs (a) and (b) of this section.

§ 207.104 Response to charging letter.

(a) *Time for filing.* A charged party shall have twenty (20) days from the date of service of the charging letter within which to file a written response to the allegations made in the charging letter unless otherwise ordered by the administrative law judge.

(b) *Form and content.* Each response shall be under oath and signed by the charged party or its duly authorized officer, attorney, or agent, with the name, address, and telephone number of the same. Each charged party shall respond to each allegation in the charging letter, and may set forth a concise statement of the facts constituting each ground of defense. There shall be a specific admission or denial of each fact alleged in the charging letter, or if the charged party is without knowledge of any such fact, a statement to that effect.

(c) *Request for confidentiality.* The response shall contain a statement as to whether the charged party seeks an order to maintain the confidentiality of all or part of the proceedings to the extent practicable, pursuant to § 207.105 of this subpart.

§ 207.105 Confidentiality.

(a) *Protection of proprietary and privileged information.* As necessary for the preparation of a defense, counsel for the charged party may be granted access in these proceedings to proprietary information or to the privileged information the disclosure of which is the subject of the proceedings. Any such access shall be under protective order consistent with the provisions of this subpart.

(b) *Confidentiality of proceedings.* Upon the request of any charged party pursuant to § 207.106 of this subpart, the administrative law judge will issue an appropriate confidentiality order. This order will provide for the confidentiality, to the extent practicable and permitted by law, of information relating to allegations of violations of a protective order, consistent with public policy considerations and the needs of the parties in conducting of the sanctions proceedings. The order will provide that all proceedings under this provision shall be kept confidential within the terms of the order except to the extent incorporated into a published final decision of the Commission. Any confidential information not disclosed in such decision will remain protected.

§ 207.106 Interim Measures.

(a) At any time after proceedings are initiated, the administrative law judge, upon motion by the investigative attorney, or on his or her own initiative, may issue a recommended determination to revoke the allegedly-violated protective order, to disclose information about the proceedings that would otherwise be kept confidential, or to take other appropriate interim measures.

(b) Before issuing a determination recommending interim sanctions, the administrative law judge shall afford a party against whom such measures are proposed the opportunity to oppose the motion for interim sanctions. The administrative law judge will notify the parties of the determination on interim measures as expeditiously as possible, usually within no more than twenty (20) days from the date the motion was filed.

(c) The Commission shall review any recommended determination regarding the imposition of interim measures, and within twenty (20) days from issuance of the recommended determination, or within such other time as the Commission may order, the Commission shall issue its determination regarding interim measures. The Commission may impose any appropriate interim measures.

(d) The administrative law judge may at any time recommend to the Commission that interim measures be revoked. Within ten (10) days after issuance of any such recommendation, or within such other time as the Commission may order, the Commission shall rule on such recommendation.

(e) If the Commission takes interim measures that revoke or modify an outstanding protective order issued in the course of an ongoing panel review, the Commission Secretary shall immediately notify the Secretariat of these measures. If any such measures are revoked, the Commission Secretary shall immediately notify the Secretariat of such change.

§ 207.107 Motions.

(a) *Presentation and disposition.* (1) After issuance of the charging letter and while part of the proceeding is pending before the administrative law judge, all motions relating to that part of the proceeding shall be addressed to the administrative law judge. If no administrative law judge has yet been assigned, all motions shall be addressed to the Chief Administrative Law Judge.

(2) While part of a proceeding is pending before the Commission, all motions relating to that part of the proceeding shall be addressed to the Chairman of the Commission. All written motions shall be filed with the Commission Secretary and served upon all parties.

(b) *Content.* All written motions shall state the particular order, ruling, or action desired and the grounds therefor.

(c) *Responses.* Any response to a motion shall be filed within ten (10) days after service of the motions, or within such longer or shorter time as may be designated by the administrative law judge or the Commission. The moving party shall have no right to reply, except as permitted by the administrative law judge or the Commission.

(d) *Service.* All motions, responses, replies, briefs, petitions, and other documents filed in sanctions proceedings under this subpart shall be served by the party filing the document upon each other party. Service shall be made upon counsel for the party unless the administrative law judge or the Commission orders otherwise.

§ 207.108 Preliminary Conference.

As soon as practicable after the response to the charging letter is filed, unless the administrative law judge determines that such a conference is not necessary, the administrative law judge shall direct counsel or other representatives for the parties to meet with him at a preliminary conference. At such conference, he shall consider the issuance of such orders as he deems necessary for the conduct of the proceedings. Such orders may include, as appropriate under these regulations, the establishment of a discovery schedule or the issuance of an order, if requested, to provide for maintaining the confidentiality of the proceedings pursuant to § 207.105(b) of this subpart.

§ 207.109 Discovery.

(a) *Discovery methods.* All parties may obtain discovery under such terms and limitations as the administrative law judge may order. Discovery may be by one or more of the following methods:

(1) Depositions upon oral examination or written questions. The attendance of witnesses at a deposition may be compelled by subpoena as provided in § 207.110 of this subpart;

(2) Written interrogatories;

(3) Production of documents or things for inspection and other purposes; and

(4) Requests for admissions.

If a party or any officer or agent of a party fails to comply with a discovery order, the administrative law judge may take such action as he deems reasonable and appropriate, including the issuance of evidentiary sanctions or deeming the respondent to be in default.

(b) *Depositions of nonparty officers or employees of the United States or Canadian governments.*—(1) *Depositions of Commission officers or employees.* A party desiring to take the deposition of an officer or employee of the Commission (other than a member of the Office of Unfair Import Investigations or of the Office of the Administrative Law Judges), or to obtain nonprivileged documents or other physical exhibits in the custody, control, and possession of such officer or employee, may file a written motion requesting the administrative law judge to recommend that the Commission direct that officer or employee to testify or produce the requested materials.

(2) *Depositions of officers or employees of other United States agencies, or of the Canadian government.* A party desiring to take the deposition of an officer or employee of another agency, or of the Canadian government, or to obtain nonprivileged documents or other physical exhibits in the custody, control, and possession of such officer or employee, may file a written motion requesting the administrative law judge to recommend that the Commission seek the testimony or production of requested material from the officer or employee.

§ 207.110 Subpoenas.

(a) *Application for issuance of a subpoena.* Except as provided in § 207.109(b) of this subpart, an application for issuance of a subpoena requiring a person to appear and depose or testify at the taking of a deposition or at a hearing shall be made to the administrative law judge. The application shall be made in writing, and shall specify the material to be produced as precisely as possible, showing the relevancy of the material and the reasonableness of the scope of the subpoena. The application shall be ruled upon by the administrative law judge.

(b) *Enforcement of a subpoena.* A motion for enforcement of a subpoena shall be made to the administrative law judge. Upon consideration of the motion and any response thereto, the administrative law judge shall recommend to the Commission in favor of or against enforcement. The administrative law judge's recommendation shall provide the basis therefor, and shall address each of the criteria necessary for enforcement of an administrative subpoena. After consideration of the administrative law judge's recommendation, the Commission shall determine whether initiation of enforcement proceedings is appropriate.

(c) *Application for subpoena grounded upon the Freedom of Information Act.* No application for a subpoena for production of documents grounded upon the Freedom of Information Act (5 U.S.C. 552) shall be entertained by the administrative law judge or the Commission.

§ 207.111 Prehearing conference.

The administrative law judge may direct counsel or other representatives for the parties to meet with him to consider any or all of the following:

(a) Simplification and clarification of the issues;

(b) Scope of the hearing;

(c) Stipulations and admissions of either fact or the content and authenticity of documents;

(d) Disclosure of the names of witnesses and the exchange of documents or other physical evidence that will be introduced in the course of the hearing; and

(e) Such other matters as may aid in the orderly and expeditious disposition of the proceedings.

§ 207.112 Hearings.

(a) *Purpose of and scheduling of hearings.* An opportunity for a hearing before an administrative law judge shall be provided for each action initiated under this subpart. The purpose of such hearing shall be to take evidence and hear argument in order to determine whether a party has violated or induced violation of the provisions of a protective order, and if so, what sanctions are appropriate. Hearings shall proceed with all reasonable expedition, and, insofar as practicable, shall be held at one place, continuing until completed unless otherwise ordered by the administrative law judge.

(b) *Joinder or consolidation.* If sanctions are proposed against more than one party or if violations of more than one protective order are alleged, the administrative law judge may order such joinder or consolidation as may tend to avoid unnecessary costs or delay.

(c) *Compliance with Administrative Procedure Act.* The administrative law judge shall conduct a hearing that complies with the requirements of section 554 of title 5 of the United States Code.

§ 207.113 The Record.

(a) *Definition of the record.* The record shall consist of—

(1) All pleadings, the charging letter and response thereto, motions and responses, and other documents and exhibits properly filed with the Commission Secretary;

(2) All orders, notices, and the recommended or initial determinations of the administrative law judge;

(3) Orders, notices, and any final determination of the Commission;

(4) Hearing transcripts, and evidence admitted at the hearing; and

(5) Any other items certified into the record by the administrative law judge.

(b) *Certification of the record.* The record shall be certified to the Commission by the administrative law judge upon his filing of the initial determination.

§ 207.114 Initial determination.

(a) *Time for filing of initial determination.* (1) Except as may otherwise be ordered by the Commission, within ninety (90) days, or within 120 days in a complicated case, of the date of issuance of the charging letter, the administrative law judge shall certify the record to the Commission and shall file with the Commission an initial determination as to whether each charged party has violated or induced violation of the provisions of a protective order, and as to appropriate sanctions. Any party may request the administrative law judge to treat the proceeding as a complicated case requiring 120 days for completion.

(2) The administrative law judge may request the Commission to extend the time period for issuance of the initial determination as for good cause shown.

(b) *Contents of the initial determination.* The initial determination shall include the following:

(1) An opinion stating findings and conclusions necessary for the disposition of all material issues of fact, law, or discretion, and the reasons or bases therefor.

(2) A statement that the initial determination shall become the determination of the Commission unless a party files a petition for review of the determination pursuant to § 207.115 or the Commission pursuant to § 207.116 orders on its own motion a review of the initial determination or certain issues therein.

(c) *Burden of proof.* A finding that a charged party violated or induced the violation of the terms of a protective order shall be supported by clear and convincing evidence. The administrative law judge may impose any appropriate

sanctions if clear and convincing evidence supports a finding that the charged party violated or induced the violation of the terms of a protective order.

(d) *Effect of initial determination.* The initial determination shall become the determination of the Commission forty-five (45) days after the date of service of the initial determination, unless the Commission within such time orders review of the initial determination or certain issues therein pursuant to §§ 207.115 or 207.116 or by order shall have changed the effective date of the initial determination. In the event an initial determination becomes the determination of the Commission, the parties shall be notified thereof by the Commission Secretary.

§ 207.115 Petition for review.

(a) *The petition and responses.* (1) Any party may request a review by the Commission of the initial determination by filing with the Commission Secretary a petition for review, except that a party who has defaulted may not petition for review of any issue regarding which the party is in default.

(2) Any person who wishes to obtain judicial review pursuant to section 403(c) of the FTA Act must first seek review by the Commission in accordance with the procedures set forth in this regulation governing petitions for review.

(3) Any petition for review must be filed within fourteen (14) days after service of the initial determination on the charged party. The petition shall:

(i) Identify the party seeking review;

(ii) Specify the issues upon which review is sought, including a statement as to whether review is sought of the initial determination regarding the existence of a violation, or of the initial determination regarding sanctions;

(iii) Set forth a concise statement of the relevant law or material facts necessary for consideration of the stated issues; and

(iv) Present a concise argument setting forth the reasons why review is necessary or appropriate.

(4) Any issue not raised in the petition for review filed under this section will be deemed to have been abandoned and may be disregarded by the Commission in determining whether to review, and in reviewing, an initial determination.

(5) Any party may file a response to the petition within seven (7) days after service of the petition, except that a party who has defaulted may not file a response to any issue regarding which the party is in default.

(b) *Grant or denial of review.* (1) The Commission shall decide whether to grant a petition for review, in whole or in part, within forty-five (45) days of the service of the initial determination on the parties, or by such other time as the Commission may order.

(2) The Commission shall base its decision whether to grant a petition for review upon the petition and response thereto, without oral argument or further written submissions, unless the Commission shall order otherwise.

(3) The Commission shall grant a petition for review of an initial determination or certain issues therein when at least one of the participating Commissioners votes for ordering review. In its notice, the Commission shall establish the scope of the review and the issues that will be considered and make provisions for the filing of briefs and oral argument if deemed appropriate by the Commission. The notice that the Commission has granted the petition shall be served by the Commission Secretary on all parties.

§ 207.116 Commission review on its own motion.

Within forty-five (45) days of the date of service of the initial determination, the Commission on its own initiative may order review of an initial determination or certain issues therein when at least one of the participating Commissioners votes for ordering review.

§ 207.117 Review by Commission.

On review, the parties may not present argument on any issue that is not set forth in the notice of review. On review, the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge. The Commission may make any findings or conclusions that in its judgment are proper based on the record in the proceeding.

§ 207.118 Role of the General Counsel in Advising the Commission.

When the allegedly-violated protective order was issued in connection with a panel review that was not completed as of the date the charging letter was issued, and in other appropriate circumstances, the General Counsel and any other Commission attorneys who have participated in the panel review, shall not participate in advising the Commission as to the sanctions proceedings brought under this subpart. In such cases, the Assistant General Counsel for Section 337 Investigations, who shall have had no role in the panel review or underlying investigation, shall be designated Acting General Counsel.

§ 207.119 Reconsideration.

(a) *Petition for reconsideration.* Within fourteen (14) days after service of a Commission determination, any party may file with the Commission a petition for reconsideration, setting forth the relief desired and the grounds in support thereof. Any petition filed under this section must be confined to new questions raised by the determination or action ordered to be taken thereunder and upon which the petitioner had no opportunity to submit arguments.

(b) *Disposition of petition for reconsideration.*

The Commission shall grant or deny the petition for reconsideration. No response to a petition for reconsideration will be received unless requested by the Commission, but a petition for reconsideration will not be granted in the absence of such a request. If the motion to reconsider is granted, the Commission may affirm, set aside, or modify its determination, including any action ordered by it to be taken thereunder. When appropriate, the Commission may order the administrative law judge to take additional evidence.

§ 207.120 Public notice of sanctions.

If the final Commission decision is that there has been a violation of a protective order, and that public sanctions are to be imposed, notice of the decision will be published in the **Federal Register** and forwarded to the Secretariat. Such publication will occur no sooner than fourteen (14) days after issuance of a final decision or after any petition for reconsideration has been denied. The Commission Secretary shall also serve notice of the Commission decision upon such departments and agencies of the United States and Canadian governments as the Commission deems appropriate.

Issued: August 23, 1989.

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 89-20460 Filed 8-31-89; 8:45 am]

BILLING CODE 7020-02-M

DEPARTMENT OF JUSTICE

Office of the Attorney General

28 CFR Part 0

[Order No. 1364-89]

Delegation of Authority to the Assistant Attorneys General for the Criminal and Civil Rights Division

AGENCY: Office of the Attorney General.

ACTION: Final Rule.

SUMMARY: This order amends 28 CFR part O to delegate the Attorney General's authority under 18 U.S.C. 245, which protects individuals against civil rights violations, to the Assistant Attorneys General for the Criminal and Civil Rights Divisions. This order will revise the Code of Federal Regulations so that it accurately reflects the current rules.

EFFECTIVE DATE: August 21, 1989.

FOR FURTHER INFORMATION CONTACT: Carol A. Williams, Special Counsel, Office of Legal Counsel, telephone: 202-633-3865. This is not a toll-free number.

SUPPLEMENTARY INFORMATION: This regulation will amend title 28 of the Code of Federal Regulations to reflect an internal Department of Justice delegation of authority. This is not a major rule within the meaning of Exec. Order No. 12291. This will not have an impact on a significant number of small businesses. 5 U.S.C. 901.

List of Subjects in 28 CFR Part 0

Authority delegations (Government agencies).

By the authority vested in me including 28 U.S.C. 509, 510, and 5 U.S.C. 301, subparts J and K of part O of title 28 of the Code of Federal Regulations are 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, 2303, 3101; 8 U.S.C. 1103, 1324A, 1427(g); 15 U.S.C. 644(k); 18 U.S.C. 2254, 3621, 3622, 4001, 4041, 4042, 4044, 4082, 4201 *et seq.*, 6003(b); 21 U.S.C. 871, 881(d), 904; 22 U.S.C. 263a, 1621-1645o, 1622 note; 28 U.S.C. 509, 510, 515, 516, 519, 524, 543, 552, 552a, 569; 31 U.S.C. 1108, 3801 *et seq.*; 50 U.S.C. App. 1989b, 2001-2017p; Pub. L. No. 91-513, sec. 501; EO 11919; EO 11267; EO 11300.

2. Section 0.50 is amended by adding a new paragraph (k) to read as follows:

§ 0.50 [AMENDED]

* * * * *

(k) Upon request, certifications under 18 U.S.C. 245.

3. Section 0.55 is amended by adding a new paragraph (t) to read as follows:

§ 0.55 [AMENDED]

* * * * *

(t) Upon request, certifications under 18 U.S.C. 245.

Dated: August 21, 1989.

Dick Thornburgh,

Attorney General.

[FR Doc. 89-20304 Filed 8-31-89; 8:45 am]

BILLING CODE 4410-01-M

DEPARTMENT OF DEFENSE

Office of the Secretary

32 CFR Parts 51, 52, 83, 170, 262, and 355

Removal of Parts

AGENCY: Department of Defense.

ACTION: Final rule.

SUMMARY: This document removes 32 CFR Parts 51, 52, 83, 170, 262, and 355. These parts are canceled and no longer valid. This final rule is published to ensure that the documents listed are removed from the Code of Federal Regulations.

EFFECTIVE DATE: September 1, 1989.

FOR FURTHER INFORMATION CONTACT: Ms. L. M. Bynum, Correspondence and Directives Directorate, Washington, DC 20301-1155, telephone 202-4111.

SUPPLEMENTARY INFORMATION:

List of Subjects

32 CFR Part 51

Civil rights; Education; Equal employment opportunity; Miliary personnel.

32 CFR Part 52

Military personnel.

32 CFR Part 83

Armed forces; Elementary and secondary education; Students.

32 CFR Part 170

Armed forces; Government procurement.

32 CFR Part 262

Armed forces reserves; Federal buildings and facilities; Grant programs-National defense.

32 CFR Part 355

Organization and functions (Government agencies).

PARTS 51, 52, 83, 170, 262, and 355—[REMOVED]

Accordingly, under the authority of 10 U.S.C. 131, Title 32, Chapter I, is amended by removing Parts 51, 52, 83, 170, 262, and 355.

Dated: August 28, 1989.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 89-20599 Filed 8-31-89; 8:45 am]

BILLING CODE 3810-01-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 65

[COTP Tampa Regulation 89-35]

Safety Zone Regulations; Headwaters of Crystal River FL., Kings Bay, Crystal Bay

AGENCY: Coast Guard, DOT.

ACTION: Emergency rule.

SUMMARY: The Coast Guard is establishing a safety zone near the headwaters of the Crystal River. Kings Bay, Crystal Bay and their adjoining waters are a safety zone. All boating traffic transiting these waters must proceed at "idle speed." This safety zone becomes effective at 6:00 p.m. Friday, 1 September 1989 and expires at 6:00 a.m. Tuesday, 5 September 1989.

This regulation is needed to reduce the hazards to boaters and their vessels associated with the heavy traffic anticipated in the area.

EFFECTIVE DATE: These regulations become effective at 6:00 p.m. Friday, 1 September 1989. It terminates at 6:00 a.m. Tuesday, 5 September 1989.

FOR FURTHER INFORMATION CONTACT: LT P.J. MacDonald (813) 228-2194.

SUPPLEMENTARY INFORMATION: In accordance with 5 U.S.C. 553, a notice of proposed rulemaking was not published for this regulation and good cause exists for making it effective in less than 30 days after **Federal Register** publication. Publishing an NPRM and delaying its effective date would be contrary to the public interest since immediate action is needed to prevent possible damage to the boaters and their vessels involved.

This regulation is issued pursuant to 33 U.S.C. 1231 as set out in the authority citation for all of part 165.

Drafting Information

The drafters of this regulation are LT P.J. MacDonald, Project Officer for the Captain of the Port Tampa, and LCDR Dickman, Project attorney, Seventh Coast Guard District Legal Office.

Discussion of Regulations

The circumstances requiring this regulation will begin on 1 September 1989 at 6:00 p.m. The regulation is needed to protect boaters and vessel traffic from the hazards of the high vessel traffic anticipated in the area.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Security measures, Vessels, Waterways.

Regulation

In consideration of the foregoing, Subpart C of part 165 of title 33, Code of Federal Regulations, is amended as follows:

PART 165—[AMENDED]

1. The authority citation for Part 165 continues to read as follows:

Authority: 33 U.S.C. 1231; 50 U.S.C. 191; 33 CFR 1.05–1(g), 6.04–1, 6.04–6 and 160.5, 49 CFR 1.46.

2. A new § 165.T07035 is added to read as follows:

§ 165.T07035 Safety Zone: Sarasota Bay and Gulf of Mexico, Sarasota, FL

(a) *Location,* The following area is a safety zone: The headwaters of the Crystal River, Kings Bay, Crystal Bay and their adjoining waters.

(b) *Effective date:* This regulation becomes effective at 6:00 p.m. 1 September 1989. It terminates at 6:00 a.m. on 5 September 1989.

(c) *Regulations:* In accordance with the general regulations in 165.23 of this part, all vessel traffic transiting the established safety zone must proceed at "Idle Speed".

Dated: August 25, 1989.

H.D. Jacoby,

Captain, U.S. Coast Guard, Captain of the Port, Tampa, FL.

[FR Doc. 89–20628 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–14–M

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33 CFR Part 117

[CGD8–89–05]

Drawbridge Operation Regulations; Inner Harbor Navigation Canal, LA

AGENCY: U.S. Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: At the request of the Louisiana Department of Transportation and Development (LDOTD), the Coast Guard is changing the regulation governing the operation of the new Danziger bridge over the Inner Harbor Navigation Canal, mile 3.1, in New Orleans, Orleans Parish, Louisiana, by permitting the draw to open on at least four hours advance notice from 8 p.m. to 7 a.m. This change is in addition to the present regulation for the bridge. This change is being made because of the infrequent requests for openings of the draw during the prescribed advance notice period. This action will relieve the bridge owner of the burden of having a person constantly available at the bridge to open the draw, while still providing for the reasonable needs of navigation.

EFFECTIVE DATE: This regulation becomes effective on October 2, 1989.

FOR FURTHER INFORMATION CONTACT: Mr. John Wachter, Bridge Administration Branch, Eighth Coast Guard District, telephone (504) 589–2965.

SUPPLEMENTARY INFORMATION: On 30 March 1989, the Coast Guard published a proposed rule (54 FR 13080) concerning this amendment. The Commander, Eighth Coast Guard District, also published the proposal as a Public Notice dated 6 April 1989. In each notice interested parties were given until 15 May 1989 to submit comments.

Drafting Information

The drafters of this regulation are Mr. John Wachter, project officer, and Commander J. A. Unzicker, project attorney.

Discussion of Comments

Five letters of comment were received in response to public notification of the proposed rule change. The Federal Emergency Management Agency, Western Towing Company, and Navios Ship Agencies, Inc. each offered no objection to the proposed rule. Two letters of concern were received. Johnson Maritime Services (Gulf), Inc., and the New Orleans Steamship Association each expressed concern about the economic impact on deep draft traffic caused by delayed bridge openings. The Louisiana Department of Transportation and Development answered the concern to the respondent's satisfaction. Therefore in the absence of any objection to the proposed rule as published in (54 FR 13080) on 30 March 1989, the final rule is unchanged from the proposed rule.

Federalism Implications

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that the final rulemaking does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Economic Assessment and Certification

This regulation is considered to be non-major under Executive Order 12291 on Federal Regulation and nonsignificant under the Department of Transportation regulatory policies and procedures (44 FR 11034: February 26, 1979).

The economic impact of this proposal is expected to be so minimal that a full regulatory evaluation is unnecessary. The basis for this conclusion is that very few vessels now pass the bridge during the advance notice period of 8 p.m. to 7 a.m. For that period, the bridge opens about one time every three days. When the need arises, the vessels involved can reasonably give four hours advance notice for a bridge opening during that period by placing a collect call to the bridge owner at anytime. Mariners requiring the bridge opening are repeat users and scheduling their arrival at the bridge at the appointed time should involve little or no additional expense to them. Since the economic impact of this regulation is expected to be minimal, the Coast Guard certifies that it will not have a significant impact on a substantial number of small entities.

The advance notice for opening of the draw can be given by placing a collect call at anytime to the LDOTD in Bridge City, Louisiana, telephone (504) 436–9100. From afloat, this contact may be made by radiotelephone through a public coast station.

The LDOTD recognizes that there may be an unusual occasion to open the bridge on less than four hours notice for an emergency, or to operate the bridge on demand for an isolated but temporary surge in waterway traffic, and has committed to doing so if such an event should occur.

List of Subjects in 33 CFR Part 117

Bridges.

Regulation

In consideration of the foregoing, part 117 of title 33, Code of Federal Regulations, is amended as follows:

PART 117—DRAWBRIDGE OPERATION REGULATIONS

1. The authority citation for part 117 continues to read as follows:

Authority: 33 U.S.C. 499; 49 CFR 1.46; 33 CFR 1.05–1(g); 33 CFR 117.43.

2. Section 117.458 is revised to read as follows:

§ 117.458 Inner Harbor Navigation Canal, New Orleans.

(a) The draw of the US90 (Danziger) bridge, mile 3.1, shall open on signal;

except that, from 8 p.m. to 7 a.m. the draw shall open on signal if at least four hours notice is given, and the draw need not be opened from 7 a.m. to 8:30 a.m. and 5 p.m. to 6:30 p.m. Monday through Friday.

(b) The draw of the Leon C. Simon Blvd. (Seabrook) bridge, mile 4.6, shall open on signal; except that, from 7 a.m. to 8:30 a.m. and 5 p.m. to 6:30 p.m. Monday through Friday, the draw need not be opened.

Dated: August 21, 1989.

W.F. Merlin,

Rear Admiral, U.S. Coast Guard Commander, Eighth Coast Guard District.

[FR Doc. 89-20680 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-14-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[FRL-3638-4]

Approval and Promulgation of Implementation Plans; Ohio

AGENCY: United States Environmental Protection Agency (USEPA).

ACTION: Final Rulemaking.

SUMMARY: In a November 16, 1988, notice of proposed rulemaking, USEPA proposed to disapprove a site-specific revision to the Ohio State Implementation Plan (SIP) for ozone. This revision is a relaxation of the reasonably available control technology (RACT) requirement for volatile organic compounds (VOC), for the Paper Products Company (PPC) roll coating line. This facility is located in Hamilton County, Ohio, an area designated as nonattainment for ozone.

In today's Final Rulemaking, USEPA is disapproving this SIP revision because (1) it has not been demonstrated that it is technically or economically infeasible for PPC to meet the existing RACT limit, and (2) the State has not shown that this variance is consistent with an approvable attainment demonstration for the Cincinnati area.

EFFECTIVE DATE: This final rulemaking becomes effective on October 2, 1989.

ADDRESSES: Copies of the SIP revision are available at the following addresses for review: (It is recommended that you telephone Uylaine E. McMahan, at (312) 886-6031, before visiting the Region V office.)

U.S. Environmental Protection Agency, Region V, Air and Radiation Branch (5AR-26), 230 South Dearborn Street, Chicago, Illinois 60604.

Ohio Environmental Protection Agency, Office of Air Pollution Control, 1800 WaterMark Drive, Columbus, Ohio 43266-0149.

A copy of today's revision to the Ohio SIP is available for inspection.

FOR FURTHER INFORMATION CONTACT: Uylaine E. McMahan Air and Radiation Branch (5AR-26) U.S. Environmental Protection Agency, Region V, Chicago, Illinois 60604, (312) 886-6031.

SUPPLEMENTARY INFORMATION: On July 16, 1986, the Ohio Environmental Protection Agency (OEPA) submitted a proposed SIP revision consisting of a relaxation of RACT requirements for a roll coating line at PPC, located in Hamilton County, Ohio. The roll coating line produces paperboard used in the food industry. The proposed revision includes the following conditions:

1. The source shall not apply more than 10 gallons of coatings in any 1 day.
2. PPC must keep monthly records for all coating material used by the source.
3. PPC must submit annual reports on source emissions.

The variance contains no limits on total emissions or emission rates.

On October 2, 1986, USEPA notified OEPA that the July 16, 1986, submittal was deficient (see USEPA's September 15, 1986, technical support document (TSD)). The OEPA did not respond to USEPA's October 2, 1986, letter.

I. Current VOC SIP

Under the existing federally approved SIP, each roll coating line is subject to the control requirements contained in OAC Rule 3745-21-09(F), and the compliance schedule contained in OAC Rule 3745-21-04(C)(5). These rules require PPC to meet a limit of 2.9 pounds of VOC per gallon of coating, excluding water, by April 1, 1982. USEPA approved these rules as meeting the RACT requirements of the Clean Air Act (CAA) on October 31, 1980 (45 FR 72122), and June 29, 1982 (45 FR 28097).

II. Deficiencies in the RACT Relaxation

An exemption from the VOC regulations for this source constitutes a site-specific relaxation of RACT (i.e., a source-specific redefinition of RACT). In order for such a relaxation to be approved by USEPA PPC must demonstrate that compliance with the applicable limit is technically or economically infeasible.

III. Proposed SIP Revision

In a November 16, 1988, (53 FR 46097) notice of proposed rulemaking, USEPA proposed to disapprove PPC's relaxation of RACT for VOC involving its roll coating line. On December 16, 1988, the OEPA submitted comments to USEPA.

OEPA's Comment

OEPA asked that the revision be reviewed under the "five percent equivalency" policy based on the following:

Based on a maximum allowed daily usage of 10 gallons of coatings, the maximum daily emission would be 60 pounds of VOC (coating with 6.0 pounds of VOC per gallon and 10 percent solids by volume, as reported by the company). The related allowable daily emission would be 11.4 pounds of VOC (based on 81 percent control, USEPA's presumptive RACT for add-on control). An exemption for this site would increase the daily allowable emission by 48.6 pounds of VOC (22.0 kilograms of VOC). This represents a 2.8 percent increase in allowable daily VOC emission during 1982 for the paper coating category within the ozone SIP for Cincinnati. The paper coating category for Hamilton County has a total daily allowable emission of 537 kilograms, as reported in that SIP and in a letter of December 23, 1986, to Steve Rothblatt, Chief, Air and Radiation Branch Region V, USEPA. However, the seven-county demonstration area of the Cincinnati ozone SIP has a total daily allowable emission of 799 kilograms for paper coating during 1982.

USEPA's Response

The 5 percent equivalency policy is intended to be used to justify a different cutoff for applicability on a category-wide basis. It *cannot* be used to justify a site-specific relaxation of RACT.

Conclusion

USEPA is disapproving this SIP revision for PPC because (1) it has not been demonstrated that it is technically or economically infeasible for PPC to meet the RACT limit, and (2) the State has not shown that this variance is consistence with an approvable attainment demonstration for the Cincinnati area.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by (60 days from today). This action may not be challenged later in proceedings to enforce its requirements. (See 307(b)(2).)

This action has been classified as a Table 3 action by the Regional Administrator under the procedures published in the **Federal Register** on January 19, 1989, (54 FR 2214-2225). On January 6, 1989, the Office of Management and Budget waived Tables 2 and 3 SIP revisions (54 FR 2222) from the requirements of section 3 of Executive Order 12291 for a period of 2 years.

List of Subjects in 40 CFR Part 52

Environmental Protection, Air pollution control, Ozone, Hydrocarbon, Carbon monoxide, Intergovernmental offices.

Authority: 42 U.S.C. 7401–7642.

Dated: August 14, 1989.

Valdas V. Adamkus,

Regional Administrator.

Title 40 of the Code of the Federal Regulation, chapter 1, part 52, is amended as follow:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

Subpart KK—Ohio

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401–7642.

2. Section 52.1885 is amended by adding paragraph (q) to read as follows:

§ 52.1885 Control strategy: Ozone.

* * * * *

(q) Disapproval—On July 16, 1986, the Ohio Environmental Protection Agency submitted a proposed relaxation of reasonably available control technology (RACT) requirements for a roll coating line at Paper Products Company (PPC), located in Hamilton County, Ohio. The roll coating line produces paperboard used in the food industry. The proposed relaxation of RACT included the following conditions:

(1) The source shall not apply more than 10 gallons of coatings in any 1 day.

(2) PPC must keep monthly records for all coating material used by the source.

(3) PPC must submit annual reports on source emissions.

The variance contains no limits on emissions or emission rates.

[FR Doc. 89–20640 Filed 8–31–89; 8:45 am]

BILLING CODE 6560–50–M

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40 CFR Part 52

[FRL–3638–5, KY–030]

Approval and Promulgation of Implementation Plans, Kentucky; State Regulation for Prevention of Significant Deterioration (PSD) and Visibility New Source Review in Attainment Areas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: In this action EPA is finalizing approval of revisions to the Kentucky State Implementation Plan (SIP) which were submitted to EPA on February 20, 1986. This action was proposed on March 17, 1987 (52 FR 8311). These revisions include a regulation for prevention of significant deterioration (PSD), a visibility monitoring strategy, and regulations for visibility new source review in attainment areas. This approval of Kentucky's PSD regulation will give the Natural Resources and Environmental Protection Cabinet (NREPC) full authority to implement and enforce the current PSD program in Kentucky. PSD requirements for particular matter (PM_{10}) are not included in this action. Kentucky's PSD requirements for PM_{10} were recently submitted to EPA and will be acted on in a separate Federal Register Notice.

The principal effect of the new visibility protection regulations will be to require the State to consider visibility impacts when reviewing permit applications for new major sources and major modifications in attainment areas which could affect visibility in federal Class I areas.

DATE: This rule will become effective on October 2, 1989.

ADDRESSES: Copies of the documents relevant to this action are available for public inspection during normal business hours at the following locations:

Environmental Protection Agency, Region IV, Air Programs Branch, 345 Courtland Street NE., Atlanta, Georgia 30365

Natural Resources and Environmental Protection Cabinet, Division of Air Pollution Control, 18 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601

Public Information Reference Unit, Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

FOR FURTHER INFORMATION CONTACT: Pamela Adams of the EPA Region IV Air Programs Branch at the above address, telephone (404) 347–2864 or FTS 257–2864.

SUPPLEMENTARY INFORMATION: Following a December 30, 1985, public hearing in conformity with 40 CFR 51.102 (old 51.4), the Commonwealth of Kentucky's Natural Resources and Environmental Protection Cabinet (NREPC) adopted regulation changes involving PSD and visibility and submitted them to EPA on February 20, 1986, for approval as implementation plan revisions. EPA proposed to approve the revisions on March 17, 1987 (52 FR 8311). This notice finalizes that approval. Comments received from the National Park Service are addressed below in the section entitled *Visibility Monitoring Strategy.*

PSD: On December 5, 1974, EPA published regulations for PSD under the 1970 version of the Clean Air Act. These regulations established a program for protecting areas with air quality better than the National Ambient Air Quality Standards (NAAQS). The Clean Air Act Amendments of 1977 changed the 1970 Act and EPA's regulations in many respects, particularly with regard to PSD. In addition to mandating certain changes to EPA's PSD regulations immediately, the new Clean Air Act, in Sections 160–169, contains comprehensive new PSD requirements. These new requirements are to be incorporated by states into their implementation plans.

On June 19, 1978 (43 FR 26380), and August 7, 1980 (45 FR 52676), EPA promulgated regulations that contain requirements that states must follow when preparing State Implementation Plan (SIP) revisions that meet the new PSD requirements.

On December 21, 1982 (47 FR 56882), EPA proposed approval of a previous version of Kentucky's regulation for Prevention of Significant Deterioration.

Natural Resources and Environmental Protection Cabinet (NREPC) adopted regulation changes involving PSD and visibility and submitted them to EPA on February 20, 1986, for approval as implementation plan revisions. EPA proposed to approve the revisions on March 17, 1987 (52 FR 8311). This notice finalizes that approval. Comments received from the National Park Service are addressed below in the section entitled *Visibility Monitoring Strategy.*

In adopting the Clean Air Act, Congress designated EPA as the agency primarily responsible for interpreting the statutory provisions and overseeing their implementation by the states. EPA must approve state programs that meet the requirements of 40 CFR part 51. Conversely, EPA cannot approve programs that do not meet those requirements. However, the requirements of the Act and 40 CFR Part 51 for New Source Review (NSR), including those for PSD, stack heights/dispersion techniques, and visibility, are by nature very complex and dynamic. It would be administratively impracticable to include all statutory interpretations in the EPA regulations and the SIPs of the various states, or to amend the regulations and SIPs every time EPA interprets the statute or regulations or issues guidance regarding the proper implementation of the NSR program. Morever, the Act does not require EPA to do so. Rather, action by EPA to

approve these NSR-related regulations and narrative as part of the Kentucky SIP has the effect of requiring the State to follow EPA's current and future interpretations of the Act's provisions and regulations, as well as EPA's operating policies and guidance (but only to the extent that such policies are intended to guide the implementation of approval state NSR programs).

Similarly, EPA approval also has the effect of superceding any interpretations or policies that the State might otherwise follow to the extent they are at variance with EPA's interpretations and applicable policies. Of course, any fundamental changes in the administration of NSR would have to be accomplished through amendments to the regulations in 40 CFR Part 51 and subsequent SIP revisions. Following today's approval of these revisions to the NSR requirements of the Kentucky SIP, EPA will continue to oversee implementation of this important program by reviewing and commenting upon proposed permits as appropriate. Specifically, EPA will comment upon proposed permits that do not implement the letter of the law, as well as EPA's statutory and regulatory interpretations and applicable guidance. If a final permit is issued which still does not reflect consideration of the relevant factors, EPA may deem the permit inadequate for purposes of implementing the requirements of the Act and Kentucky's SIP, and may consider enforcement action under Sections 113 and 167 of the Act to address the permit deficiency.

PSD: On December 5, 1974, EPA published regulations for PSD under the 1970 version of the Clean Air Act. These regulations established a program for protecting areas with air quality better than the National Ambient Air Quality Standards (NAAQS). The Clean Air Act Amendments of 1977 changed the 1970 Act and EPA's regulations in many respects, particularly with regard to PSD. In addition to mandating certain changes to EPA's PSD regulations immediately, the new Clean Air Act, in Sections 160–169, contains comprehensive new PSD requirements. These new requirements are to be incorporated by states into their implementation plans.

On June 19, 1978 (43 FR 26380), and August 7, 1980 (45 FR 52676), EPA promulgated regulations that contain requirements that states must follow when preparing State Implementation Plan (SIP) revisions that meet the new PSD requirements.

On December 21, 1982 (47 FR 56882), EPA proposed approval of a previous version of Kentucky's regulation for Prevention of Significant Deterioration (401 KAR 51:017). This proposal will not be finalized because of the amount of time that has passed (4 years) and because the regulations proposed for approval are superseded by the revised regulations proposed for approval in the March 17, 1987, **Federal Register** and finalized in this notice. These revisions to Kentucky's regulations were made primarily to respond to EPA requirements stated in the original proposal. EPA reviewed the revised regulations and found them to meet the requirements of 40 CFR 51.166 (old 51.24), except as noted in the March 17, 1987, proposal notice. The conditions mentioned in that notice are discussed below. EPA is today finalizing approval of 401 KAR 51:017 as part of the Kentucky SIP.

As stated in the proposal notice of March 17, 1987, EPA's final approval of Kentucky's PSD regulation was to be contingent upon the removal from Kentucky's regulations of the volatile organic compound (VOC) definition contained in their general definitions. For PSD purposes this definition improperly exempted compounds of low vapor pressure. Kentucky amended this definition to remove its applicability to the PSD and new source review (NSR) regulations, 401 KAR 51:017 and 401 KAR 51:052. This amended definition became effective for the Commonwealth of Kentucky on December 2, 1986. This regulatory amendment was submitted to EPA by letter of December 29, 1986.

EPA is taking no action on 51:017, Section 20, which allows rescission of State PSD permits issued under earlier versions of the State PSD regulations, because those regulations were never a part of the federally approved SIP. Sources holding these permits also hold a federal PSD permit if the sources are subject to federal PSD requirements. Rescission of those federal permits, if appropriate, may be accomplished through the procedures of 40 CFR 52.21. Federal PSD permits will not be affected by Section 20. Conversely, EPA's inaction will not affect Kentucky's ability to rescind state permits where appropriate.

The March 17, 1987, **Federal Register** notice made final approval of Kentucky's PSD regulation contingent upon Kentucky's removing the second sentence of 51:017 section 8(3). This sentence could be interpreted as exempting PSD sources from PSD review if they agree to nonattainment review. Kentucky did not intend that interpretation and deleted that sentence in an amendment submitted to EPA in the previously mentioned December 29, 1986, letter. The amended version of 51:017 became effective for the Commonwealth of Kentucky on December 2, 1986.

Kentucky's regulation adopts the definition of "stationary source" which was promulgated on June 25, 1982 (47 FR 27554), by EPA. This definition excludes all vessel emissions from the definition for purposes of determining if the source is major. On January 17, 1984, the Court of Appeals for the District of Columbia Circuit overturned and remanded to EPA for further consideration this portion of EPA's new source review regulations. EPA has not yet completed its reconsideration of how vessel emissions are to be treated. Although vessel emissions are an insignificant part of Kentucky's emission inventory, approval of Kentucky's PSD regulations was made contingent upon Kentucky's written commitment to revise their PSD regulation to incorporate revised vessel emission provisions as soon as EPA changes 40 CFR 51.166 (old 51.24). Kentucky stated this commitment in an October 17, 1986, letter to EPA.

In the **Federal Register** of July 8, 1985 (50 FR 27892), EPA published final regulations to implement section 123 of the Clean Air Act, which regulates the manner in which dispersion of pollutants from a source may be considered in setting emission limitations. These regulations limit the amount of stack height or dispersion credit a source can claim while setting its emission limitations. The dispersion techniques include the use of stack heights greater than 65 meters and the use of other techniques to increase the dispersion of emissions rather than reduce the emissions of a source. Kentucky committed to reviewing all sources under EPA's new stack height regulations. Kentucky has since promulgated a new regulation for stack heights effective June 10, 1986, to require the use of good engineering practice stack height in determining emission limitations for all sources in Kentucky. This regulation, 401 KAR 50:042, was submitted to EPA by letter of March 23, 1987, and was designed to satisfy the requirements of EPA's regulations. Final approval of this regulation was published in the September 4, 1987, **Federal Register** (52 FR 33592).

The EPA's stack height regulations were challenged in *NRDC* v. *Thomas*, 838 F.2d 1224 (D.C. Cir. 1988). On January 22, 1988, the U.S. Court of Appeals for the D.C. Circuit issued its decision affirming the regulations in large part, but remanding three provisions to the EPA for reconsideration.

These are:

1. Grandfathering pre-October 11, 1983 within-formula stack height increases from demonstration requirements [40 CFR 51.100(kk)(2)];

2. Dispersion credit for sources originally designed and constructed with merged or multiflue stacks [40 CFR 51.100(hh)(2)(ii)(A)]; and

3. Grandfathering pre-1979 use of the refined H + 1.5L formula [40 CFR 51.100(ii)(2)].

Under the Prevention of Significant Deterioration program, Kentucky will be issuing permits and establishing emission limitations that may be affected by the court-ordered reconsideration of the stack height regulations promulgated on July 8, 1985 (50 FR 27892). For this reason, the EPA has required that the State include the following caveat in all potentially affected permit approvals until the EPA completes its reconsideration of remanded portions of the regulations and promulgates any necessary revisions:

In approving this permit, the Kentucky Division for Air Quality has determined that the application complies with the applicable provisions of the stack height regulations as revised by the EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in *NRDC* v. *Thomas*, 838 F.2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when the EPA revises the regulations in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators.

Kentucky has made an enforceable commitment to include this caveat in all affected permits by letter dated May 11, 1988. This commitment is being incorporated into the Code of Federal Regulations for the State of Kentucky as part of EPA's approval action.

On September 9, 1986, EPA revised the requirements for air quality modeling procedures to be used in processing PSD permits (51 FR 32176). The Kentucky regulations were adopted before that date and did not incorporate that change. Therefore, Kentucky committed to adopting these changes to its regulations prior to nine months after approval of these PSD regulations by EPA. Kentucky committed to using the new modeling procedures in processing PSD permits in the interim. Kentucky has met these commitments by incorporating the revised version of the "Guideline on Air Quality Models" by reference in 401 KAR 50:015, Documents Incorporated by Reference. This revised version of 401 KAR 50:015 became effective for the Commonwealth of Kentucky on February 10, 1987. The other regulations which require the use of the modeling guideline, including 401 KAR 51:017, refer to 401 KAR 50:015, and thus the revised version of the guideline. The amended version of 401 KAR 50:015 was submitted to EPA on March 23, 1987. EPA proposed approval of this amended version of 401 KAR 50:015 on October 16, 1987 (52 FR 38481). EPA promulgated Supplement A to the "Guideline on Air Quality Models (revised)" (1986), EPA 450/2–78–027R on January 6, 1988 (53 FR 392). Kentucky submitted its Prevention of Significant Deterioration regulation, 401 KAR 51:017, prior to that date. Kentucky has recently incorporated Supplement A into the State's regulations. This incorporation of Supplement A became state-effective in Kentucky on October 26, 1988. The revised version of 401 KAR 50:015 incorporating Supplement A by reference is expected to be submitted to EPA in the near future.

Action is being deferred on section 12(e) regarding ozone monitoring data. This section references 401 KAR 51:052 which is not currently a part of the federally approved State Implementation Plan (SIP). Section 12(e) will be approved at a later date provided that 401 KAR 51:052 is approved.

References are made in Kentucky's State regulations to 40 CFR 51.18, Review of new sources and modifications, and 40 CFR 51.24, Prevention of Significant Deterioration. EPA's 40 CFR Part 51 regulations were recodified in the November 7, 1986 **Federal Register**. Therefore, EPA will interpret former Part 51 citations such as 51.18 and 51.24 as referring to the new citations in Part 51 as codified in the November 7, 1986, **Federal Register** notice (51 FR 40656).

EPA directly issued federal PSD permits to all new PSD sources in Kentucky between 1974 and 1980. Since that time, Kentucky has issued PSD permits pursuant to a delegation from EPA. For enforcement purposes, EPA must retain in the Kentucky SIP the EPA PSD regulations of 40 CFR 52.21 as they apply to those sources. As is the case presently, Kentucky will retain delegation of authority to enforce the Federal PSD permits issued by EPA between 1974 and 1980 and the PSD permits issued by Kentucky under delegation of authority.

Visibility

On December 2, 1980, EPA promulgated visibility regulations at 45 FR 80084, codified at 40 CFR 51.300 et seq. These regulations required that the 36 states listed in section 51.300(b)(2) accomplish the following: (1) develop a program to assess and remedy visibility impairment from new and existing sources, (2) develop a long-term (10 to 15 years) strategy to assure progress toward the national goal, (3) develop a visibility monitoring strategy to collect information on visibility conditions, and (4) consider any "integral vistas" (important views of landmarks or panoramas that extend outside the boundaries of the Class I area and are considered by the Federal Land Managers (FLM's) to be critical to the visitor's enjoyment of the Class I area) in all aspects of visibility protection. These visibility regulations only address a type of visibility impairment which can be traced to a single source or small group of sources known as reasonably attributable impairment or "plume blight." EPA deferred action on the regulation of widespread homogeneous haze (referred to as regional haze) and urban plumes due to scientific and technical limitations in visibility monitoring techniques and modeling methods (see 45 FR 80085 col. 3).

In December 1982, environmental groups filed a citizen's suit in the United States District Court for the Northern District of California alleging that EPA had failed to perform a nondiscretionary duty under section 110(c) of the Act to promulgate visibility SIPs for the 35 states that had failed to submit SIPs to EPA (EDF vs. Gorsuch, No. C 82–6850 RPA (N.D. Cal.)). The State of Alaska had submitted a SIP which was approved on July 5, 1983, at 48 FR 30623. EPA and the plaintiffs negotiated a settlement agreement for the remaining states which the court approved by order on April 20, 1984. EPA announced the details of the settlement agreement at 49 FR 20647 (May 16, 1984).

The first part of the settlement agreement required Kentucky to develop visibility new source review and visibility monitoring provisions to meet the requirements of 40 CFR 51.305 and 51.307 and submit those provisions to EPA by May 6, 1985. The first part of the settlement agreement further required EPA to approve the state submittal or to promulgate a Federal Implementation Plan (FIP) by January 6, 1986. Since Kentucky had not yet submitted a final visibility SIP, EPA promulgated a federal program for Kentucky to meet the requirements of 51.305 and 51.307 on February 13, 1986 (51 FR 5504). The federal program, which is covered by the federal visibility monitoring strategy (§ 52.26) and visibility NSR program (§ 52.27 and 52.28), was promulgated as part of the Kentucky SIP.

Kentucky has now submitted its "Plan for Visibility Protection in Class I

Areas" for EPA's approval. In accordance with the first part of the settlement agreement, this plan satisfies the visibility requirements of 40 CFR 51.305 and 51.307 (a) and (d). A visibility monitoring strategy satisfies the requirements of 40 CFR 51.305, and regulations for visibility new source review in attainment areas satisfy the requirements of 51.307 (a) and (d). Although Kentucky has revised Regulation 401 KAR 51.052 (New Source Review in Nonattainment Areas) to satisfy the requirements of 40 CFR 51.307 (b) and (c), such revisions are not being acted on in this notice. Such revisions are not pending at EPA for approval at this time. Therefore, this Federal Register notice partially removes the federal promulgation of February 13, 1986, and approves Kentucky's visibility plan in place of the parts removed.

The second part of the settlement agreement required EPA to determine the adequacy of the SIPs to meet the remaining provisions of the visibility regulations. These provisions are the general plan provisions including implementation control strategies (§ 51.302), integral vista protection (§§ 51.302 through 51.307) and long-term strategies (§ 51.306). The settlement agreement required EPA to propose and promulgate FIPs on a specified schedule to remedy any deficiencies. The original deadlines for promulgating the FIPs were renegotiated and extended by a court order on September 9, 1986. The order provided that a state could avoid federal promulgation if it submitted a SIP to address the part 2 (remaining visibility provisions) requirements by August 31, 1987.

The part 2 visibility provisions are spelled out in § 51.302(c) (General Plan Requirements) and require that the SIPs include the following: (1) An assessment of visibility impairment and a discussion of how each element of the plan relates to the national goal, (2) emission limitations, or other control measures, representing best available retrofit technology (BART) for certain sources, (3) provisions to protect integral vistas identified pursuant to § 51.304, (4) provisions to address any existing impairment certified by the FLM, and (5) a long-term (10–15 year) strategy for making progress toward the national goal pursuant to § 51.306. Kentucky submitted its plans to satisfy the part 2 visibility requirements on August 31, 1987. EPA approved such plan on July 12, 1988 (53 FR 26253).

Visibility Narrative SIP

The new narrative section states that Kentucky's visibility goal is to "prevent any future impairment of visibility in Federal Class I areas which results from man-made air pollution." This is consistent with EPA's national goal of preventing any future and remedying any existing visibility impairment in mandatory Class I areas. Kentucky has only one mandatory Class I area, the Mammoth Cave National Park. No visibility impairment has been identified in this Class I area. The narrative visibility SIP also identifies the cause of visibility impairment, outlines the State's permitting procedures as they pertain to visibility new source review, and describes the State's visibility monitoring strategy.

Kentucky's "Visibility SIP" is composed of two main parts. First, it describes the State's visibility new source review regulations. Second, it describes Kentucky's visibility monitoring strategy.

Visibility New Source Review

Kentucky has revised its Prevention of Significant Deterioration rule (401 KAR 51:017) to include notification procedures and review requirements for assessing potential visibility impacts of new major sources proposed to be located in attainment areas.

These regulations also allow the State to require monitoring of visibility in the Class I area near the proposed new facility or modification. These revisions meet the requirements of 40 CFR 51.307 for visibility new source review in attainment areas and include the necessary visibility definitions contained in 40 CFR 51.301.

Kentucky has revised its provisions for new source review in attainment areas to make it incumbent upon the State to:

- Notify the Federal Land Manager (FLM) within 30 days of receiving a permit application;
- Notify the FLM within 30 days of receiving advance notification of a permit application;
- Notify the FLM 60 days prior to any public hearing on the permit;
- Consider comments from the FLM received up to 30 days after the FLM has been notified;
- Include a visibility impairment analysis in the notification to the FLM;
- Require sources to monitor;
- Deny permits in cases where State agrees with the FLM that visibility impairment would occur; and
- Provide an explanation of nonconcurrence in the notice of public hearing or give notice as to where the explanation may be obtained if the State disagrees with the FLM that visibility impairment would occur.

Visibility Monitoring Strategy

The State's monitoring strategy will be to use data from the human observations that are made by the National Weather Service at the Bowling Green-Warren County Airport in Bowling Green, Kentucky. The airport is approximately twenty-five air miles southwest of Mammoth Cave National Park.

Observers at the airport obtain visibility readings every hour of the day and make determinations as to whether haze is present. Any visibility monitoring required by the State in a Class I area will be approved by the Federal Land Manager. Data will be used to provide background data and to determine if there are any long-term visibility trends. Throughout the development of Kentucky's "Visibility SIP," the staff of the Kentucky Division of Air Pollution Control coordinated their efforts closely with the National Park Service (NPS) park, regional, and headquarters personnel. The National Park Service stated in its comments on EPA's proposed approval that the State provided several opportunities for input and was very responsive to the NPS concerns. Relevant to the State's expressed interest in establishing a visibility monitorng station in Mammoth Cave National Park, preliminary field work was conducted by the State and the NPS to find a suitable location for such a station, but resource constraints have been precluding implementation of the monitoring site according to the NPS. Consequently, Kentucky's visibility SIP indicates that EPA's support would be necessary before Kentucky could seriously consider this undertaking. The NPS encourages EPA to provide whatever assistance may be available to help the State carry out this part of their plan.

Further details pertaining to these regulation changes are contained in the Technical Support Document, which is available for public inspection at EPA's Regional Office in Atlanta, Georgia.

Final Action

EPA has found Kentucky's regulation for prevention of significnt deterioration, visibility monitoring program, and provisions for visibility new source review in attainment areas to meet the requirements contained in 40 CFR 51.166 (old 51.24), 51.305, and 51.307 (a) and (d). EPA is therefore finalizing approval of Kentucky's regulations for prevention of significant deterioration, visibility monitoring strategy, and visibility new source review in attainment area regulations as submitted on February 20,

1986. Furthermore, EPA is partially removing the part 1 federal visibility plan which was promulgated for Kentucky on February 13, 1986, at 51 FR 5504.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by October 31, 1989. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

The Office of Management and Budget has exempted this rule from the requirements of Section 3 of Executive Order 12291.

List of Subjects in 40 CFR Part 52

Air pollution control, Incorporation by reference, Intergovernmental relations.

Incorporation by reference of the State Implementation Plan for the State of Kentucky was approved by the Director of the **Federal Register** on July 1, 1982.

Dated August 22, 1989.

William K. Reilly,

Administrator.

Part 52 of chapter I, title 40, of the Code of Federal Regulations, is amended as follows:

Subpart S—Kentucky

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401–7642.

2. Section 52.920 is amended by adding paragraph (c)(46) to read as follows:

§ 52.920 Identification of plan.

* * * * *

(c) * * *

(46) Kentucky regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, and Kentucky's State Implementation Plan Revision for the Protection of Visibility for the Commonwealth of Kentucky pursuant to 40 CFR part 51, subpart P, submitted on February 20, 1986, by the Kentucky Natural Resources and Environmental Protection Cabinet.

(i) *Incorporation by reference.* (A) Kentucky regulation 401 KAR 51:017, Prevention of significant deterioration of air quality, which became State-effective on February 4, 1986.

(ii) *Other material.* (A) Kentucky's State Implementation Revision for the Protection of Visibility for the Commonwealth of Kentucky, pursuant to 40 CFR part 51, subpart P, which became State-effective on February 4, 1986.

3. Section 52.931 is amended by removing paragraph (a), revising and redesignating paragraphs (b) and (c) as (a) and (b) respectively, and by adding a new paragraph (c) to read as follows:

§ 52.931 Significant deterioration of air quality.

(a) Regulations for preventing significant deterioration of air quality. The provisions of § 52.21 (b) through (w) are hereby incorporated and made a part of the applicable state plan for the State of Kentucky only as they apply to permits issued pursuant to § 52.21 prior to final approval of Kentucky's Regulation for Prevention of Significant Deterioration (PSD), Visibility Monitoring, and Visibility New Source Review in Attainment Areas. The provisions of § 52.21 (b) through (w) are rescinded for permits issued after final approval of Kentucky's Regulation for Prevention of Significant Deterioration (PSD), Visibility Monitoring, and Visibility New Source Review in Attainment Areas.

(b) The Commonwealth of Kentucky has committed to revising the state's regulations accordingly when EPA amends the federal vessel emissions provisions contained in 40 CFR 51.166. In a letter dated October 17, 1986, Kentucky stated:

As requested, the Division of Air Pollution Control hereby commits to changing the definition of "building, structure, facility, or installation," and any other applicable definitions, when the issue of vessel emissions is resolved at the federal level, and after the federal regulation, 40 CFR 51.24, is amended.

(d) In a letter dated May 3, 1988, EPA informed Kentucky that the following caveat must be included in all potentially affected permits due to a decision of the U.S. Court of Appeals for the District of Columbia Circuit (*NRDC* v. *Thomas*, 838 F.2d 1224):

In approving this permit, the Kentucky Division for Air Quality has determined that the application complies with the applicable provisions of the stack height regulations as revised by the EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in *NRDC* v. *Thomas*, 838 F.2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when the EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators.

Kentucky responded with a letter dated May 11, 1988, stating in part:

This is in response to your letter dated May 3, 1988 * * *. As requested by your letter, the Kentucky Division for Air Quality agrees to include the condition set forth in your letter, in all potentially affected permits issued under regulation 401 KAR 51:017 or 401 KAR 51:052. Therefore, we request that you consider this letter as our commitment that the required caveat will be included in all potentially affected permits * * *.

4. Section 52.936 is revised to read as follows:

§ 52.936 Visibility protection.

(a) The requirements of Section 169A of the Clean Air Act are not met because the plan does not include approvable procedures meeting the requirements of 40 CFR 51.307 (b) and (c) for protection of visibility in mandatory Class I Federal areas from sources in nonattainment areas.

(b) Regulations for visibility monitoring and new source review. The provisions of § 52.28 are hereby incorporated and made part of the applicable plan for the State of Kentucky.

[FR Doc. 20639 Filed 8–31–89; 8:45 am]

BILLING CODE 6560–50–M

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40 CFR Part 790

[OPTS–46019; FRL 3637–5]

Procedures Governing Testing Consent Agreements and Test Rules

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule.

SUMMARY: EPA is amending the procedural rule in 40 CFR part 790 for manufacturers and processors of chemical substances and mixtures (chemicals) performing testing pursuant to section 4 of the Toxic Substances Control Act (TSCA) by modifying and clarifying the EPA procedures for reviewing and approving or denying modifications to test standards and test schedules. This includes stating that EPA will normally: (1) Require submission of requests to extend test schedules at least 30 days before the reporting deadline; (2) limit extensions to no longer than a period of time equal to the in-life portion of the test plus 60 days, but not to exceed 1 year; and (3) grant extensions of longer than 1 year without notice and comment rulemaking only if the delay is due to unforeseen circumstances such as a demonstrated lack of laboratory availability or of a suitable test substance. By this amendment, EPA intends to reduce delays in developing required health and environmental effects test data and reduce the paperwork burden for EPA and test sponsors. This amendment also requires that all exemption applications

include the CAS number of the chemical to which the application applies.

DATES: Effective on October 31, 1989. Submit written comments on or before October 2, 1989.

ADDRESSES: Submit written comments, identified by the docket number (OPTS–46019), in triplicate to: TSCA Public Docket Office (TS–793), Office of Toxic Substances, Environmental Protection Agency, Rm. NE–G004, 401 M St., SW., Washington, DC 20460.

All submitted public comments on this interim final rule will be available for public inspection at the above address from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays.

FOR FURTHER INFORMATION CONTACT: Michael M. Stahl, Director, Environmental Assistance Division (TS–799), Office of Toxic Substances, Rm. EB–44, 401 M St., SW., Washington, DC 20460, (202) 554–1404, TDD (202) 554–0551.

SUPPLEMENTARY INFORMATION:

I. Introduction

Since 1987, EPA has promulgated over 20 test rules and consent orders that require test sponsors to perform health, environmental, and/or chemical fate tests according to specified test standards. In response to these rules and consent orders, test sponsors have submitted over 75 applications for modifying test standards or extending reporting deadlines. EPA has found that the time and effort needed to respond to these applications, especially those requiring notice and comment, has been far greater than expected. These amendments should decrease the number of applications for modification submitted by test sponsors and reduce the number of modifications that will require notice and comment.

EPA believes that these amendments make only procedural changes and do not impose any substantive requirements on manufacturers or processors subject to TSCA section 4(a) test rules and consent orders. However, EPA is inviting comment on these amendments and if these comments result in a need for changes to the interim final rule, EPA will modify this rule as appropriate. EPA will take all comments into consideration when promulgating a final rule on the procedures governing testing consent agreements and test rules.

II. Amendments

A. Modifications To Test Standards and Test Schedules

These amendments make several changes in the process that should result in test sponsors submitting fewer applications and will give EPA more flexibility in processing these applications in a timely manner.

Test sponsors should submit an application to modify a test standard only if they wish to modify one or more of the mandatory testing conditions or requirements in a test standard. The only mandatory requirements in a test standard are the "shall statements". There are few of these statements in most test standards, and they usually refer to the test species, route of exposure, length of test, minimum criteria for test acceptance, and minimum reporting requirements. If the testing laboratory selected by the test sponsor does not follow all of these "shall statements", the test sponsor may be held in violation of the rule or consent order.

Test sponsors are not required to adhere to the non-mandatory testing conditions in the test standard; i.e., the "should statements". These statements provide guidance on how to perform a test and need not be precisely followed by the test laboratory if they have a procedure they believe is better or equally acceptable.

If a test sponsor or test laboratory wants EPA to provide guidance or to clarify non-mandatory testing requirements (i.e., "should statements") they should directly contact the EPA project manager for that test rule or consent order. If the project manager is not known, the test sponsor should submit the request for guidance to the Public Docket for that rule or consent order.

The current procedural rule, in 40 CFR 790.55, lists four specific modifications of test standards or schedules that EPA considers "major". These modifications either significantly affect the scope of testing or significantly change the test schedule. Currently, EPA seeks public comment before approving any such modification. Through experience gained in handling modification requests, EPA now recognizes a need to refine the criteria that allow EPA to approve certain modifications without first seeking public comment.

Upon publication of this amendment, EPA may approve modifications to a test standard without first seeking public comment if EPA determines that the successful completion or achievement of a requirement or test condition (i.e., "shall statement") by the test laboratory is not technically feasible for that particular test chemical without modification.

With this amendment, EPA will have the authority to approve, without first obtaining public comments, a requested test schedule extension for up to 12 months instead of 6 months as currently allowed. EPA will, on a case-by-case basis, also have the latitude to approve extensions that exceed 12 months without first seeking public comment if EPA concludes that the delay is not the fault of the test sponsor and is due to unforeseen circumstances. Examples would include a demonstrated lack of test laboratory availability, a lack of availability of a suitable test substance (e.g., a 14–C labeled test organisms, or the unexpected failure of a long-term test near the end of the test.

EPA believes that this limited change in the types of circumstances for approving test standard and test schedule modifications without notice and comment is necessary to ensure the efficient and timely implementation of test rules and consent orders. Without the latitude to approve such modifications by letter, EPA would have to wait for notice and comment rulemaking before granting the modification, resulting in a delay of testing that would be much longer than if EPA granted the request by letter. EPA approval of test schedule extensions without seeking notice and comment, even if they exceed 12 months, should result in test results being submitted to EPA in a more timely manner. EPA believes this more flexible approach will benefit all parties.

B. Timing of Submission of Applications for Test Standard and Test Schedule Modifications

On several occasions, test sponsors have submitted applications for test schedule extensions just before the deadline for submission of the final report. These extension requests frequently did not contain factually documented reasons for the extension and usually suggested that the test sponsor was not closely monitoring the test laboratory.

Test sponsors should submit all applications for test schedule modifications as soon after they first realize that the test reporting deadline, as specified in the rule or consent order, cannot be met. Test sponsors should submit all extension requests at least 60 days before the reporting deadline to allow EPA sufficient time to evaluate the application and make a reasonable decision.

Unless there are extenuating circumstances, EPA does not intend to approve extension requests that are not submitted at least 30 days before the reporting deadline and do not include a sound rationale why the delay in testing could not have been avoided. The

maximum time that EPA will grant for an extension will normally equal the period of time required to perform the in-life or on-test portion of the test plus 60 days, but not to exceed 1 year.

EPA has found that the time periods specified in test rules and consent orders for specific tests are more than adequate for the successful completion of each test. This includes time for the test sponsor to select and contract with a test laboratory, develop the analytical methods if needed, perform the preliminary and definitive testing, and prepare and submit a final report. Under most circumstances, an additional extension of time equal to the in-life portion of the test plus 60 days is sufficient to overcome typical testing problems or to repeat the test if necessary.

Once EPA has granted an extension to a specific reporting deadline, normally no additional extension will be granted for the same test. Most of the tests required in test rules and consent orders are routine tests that have been successfully completed at many testing laboratories.

C. Content of Exemption Applications

This amendment requires that all exemption applications submitted by manufacturers and processors include the CAS number of the chemical subject to the rule if a CAS number has been assigned.

D. Other Amendments

To clarify the procedural rule, EPA is making several minor changes to it. These include: (1) Stating that all study plan amendments must be sent to the Office of Compliance Monitoring; (2) requiring that test sponsors include in the study protocol submitted with the study plan the rationale for combining two or more test protocols into one test protocol; (3) requiring that the reporting dates in the study plan be within the deadlines specified in the rule or consent agreement; and (4) making it clear that EPA does not routinely review, at the time of submission, the protocols submitted with the study plan to determine if the protocols comply with the EPA test standards specified in the rule or consent agreement; this is the responsibility of the test sponsor

III. Other Regulatory Requirements

A. Executive Order 12291

Under Executive Order 12291, EPA must judge whether a rule is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. EPA has determined that this procedural rule change is not major because it does not meet any of the criteria set forth in section 1(b) of the Order; i.e., it will not have an annual effect on the economy of at least $100 million, will not cause a major increase in prices, and will not have a significant adverse effect on competition or the ability of U.S. enterprises to compete with foreign enterprises.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act (15 U.S.C. 601 *et seq.* Pub. L. 96–354, September 19, 1980), EPA is certifying that this procedural rule change will not have a significant impact on a substantial number of small businesses because: (1) They are not likely to perform testing themselves, or to participate in the organization of the testing effort; (2) they would experience only very minor costs, if any, in securing exemption from testing requirements; and (3) small businesses are unlikely to be affected by reimbursement requirements.

C. Paperwork Reduction Act

OMB has approved the information collection requirements contained in this interim final rule under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*, and has assigned an OMB control number of 2070–0033.

These changes in the procedural rule for implementation of section 4 of TSCA are expected to have a negligible effect on the public reporting burden. To the extent that the clearer guidance and criteria provided by these changes reduces the number of applications for test standard and test schedule modifications submitted by test sponsors, the reporting burden will be reached.

List of Subjects in 40 CFR Part 790

Chemicals, Environmental protection, Hazardous substances, Testing, Laboratories, Reporting and recordkeeping requirements.

Dated: August 21, 1989.

Victor J. Kimm,

Acting Assistant Administrator for Pesticides and Toxic Substances.

Therefore, 40 CFR, Part 790 is amended as follows:

PART 790—[AMENDED]

1. The authority citation for part 790 continues to read as follows:

Authority: 15 U.S.C. 2603.

2. In § 790.40, by revising the introductory text of paragraph (b)(1) to read as follows:

§ 790.40 Promulgation of test rules.

* * * * *

(b) * * *

(1) Under single-phase test rule development, EPA will promulgate a test rule in part 799 of this chapter through a notice and comment rulemaking which specifies the following:

* * * * *

3. In § 790.50, by revising paragraphs (a)(2), (b)(1), and (c)(1) (v) and (vi), and by adding paragraph (e) to read as follows:

§ 790.50 Submission of study plans.

(a) * * *

(2) Persons who notify EPA of their intent to conduct tests in compliance with the requirements of a Phase I test rule as described in § 790.40(b)(2) must submit the proposed study plans for those tests on or before 90 days after the effective date of the Phase I rule; or, for processors complying with the notice described in § 790.48(b)(2), 90 days after the publication date of that notice; or 60 days after the date manufacture or processing begins as described in § 790.45(d), as appropriate, to the address in § 790.5(b).

* * * * *

(b) * * *

(1) EPA may grant requests for additional time for the development of study plans on a case-by-case basis. Requests for additional time for study plan development must be made in writing to the Director, Office of Compliance Monitoring at the address in § 790.5(d). Each extension request must state why EPA should grant the extension.

* * * * *

(c) * * *

(1) * * *

(v) Study protocol, including the rationale for any combination of test protocols; the rationale for species/strain selection; dose selection (and supporting data); route(s) or method(s) of exposure; description of diet to be used and its source; including nutrients and contaminants and their concentrations; for *in vitro* test systems, a description of culture medium and its source; and a summary of expected spontaneous chronic diseases (including tumors), genealogy, and life span.

(vi) Schedule for initiation and completion of each short-term test and of each major phase of long-term tests; dates for submission of interim progress and final reports to EPA that are within the reporting deadlines specified by EPA In the final test rule.

* * * * *

(e) *Amendments to study plans.* Test sponsors shall submit all amendments to study plans to the Director, Office of Compliance Monitoring at the address in § 790.5(d).

4. In § 790.55. by revising paragraphs (a), (b)(3) and (b)(4)(iv), and by adding paragraph (d) to read as follows:

§ 790.55 Modification of test standards or schedules during conduct of test.

(a) *Application.* Any test sponsor who wishes to modify the test schedule or the mandatory testing conditions or requirements (i.e., "shall statements") in the test standard for any test required by a test rule must submit an application in accordance with this paragraph. Application for modification must be made in writing to the Director, Office of Compliance Monitoring at the address in § 790.5(d), or by phone with written confirmation to follow within 10 working days. Applications must include an appropriate explanation and rationale for the modification. Where a test sponsor requests EPA to provide guidance or to clarify a non-mandatory testing requirement (i.e., "should statements") in a test standard, the test sponsor should submit these requests to EPA at the address in § 790.5(b).

(b) * * *

(3) Where, in EPA's judgment, the requested modification of a test standard or schedule would significantly alter the scope of the test or significantly change the schedule for completing the test, EPA will publish a notice in the **Federal Register** requesting comment on the proposed modification. However, EPA will approve a requested modification of a test standard under paragraph (b)(3) of this section without first seeking public comment if EPA believes that an immediate modification to the test standard is necessary to preserve the accuracy or validity of an ongoing test. EPA may also modify a testing requirement or test condition in a test standard if EPA determines that the completion or achievement of this requirement or condition is not technically feasible. EPA may approve a test schedule extension under paragraph (b)(3) of this section without first seeking public comment if EPA determines, on a case-by-case basis, that a delay of over 12 months is not the fault of the test sponsor and is the result of unforeseen circumstances such as a lack of laboratory availability, lack of availability of suitable test substance (e.g., 14–C labelled test substance), lack of availability of healthy test organisms, or the unexpected failure of a long-term test. EPA will publish an annual notice in the **Federal Register** announcing the approval of any test standard modifications and test schedule extensions under paragraph (b)(3) of this section and provide a brief rationale of why the modification was granted.

(4) * * *

(iv) Except as provided in paragraph (b)(3) of this section, extend the final reporting deadline more than 12 months from the date specified in the final rule.

* * * * *

(d) *Timing.* (1) Test sponsors should submit all applications for test schedule modifications at least 60 days before the reporting deadline for the test in question.

(2) EPA will not normally approve any test schedule extensions submitted less than 30 days before the reporting deadline for the test in question.

(3) Except as provided in paragraph (b)(3) of this section, EPA may grant extensions for up to 1 year but will normally limit extensions to a period of time equal to the in-life portion of the test plus 60 days.

(4) EPA will normally approve only one deadline extension for each test.

(5) Test sponsors should submit requests for test standard modifications as soon as they determine that the test cannot be successfully completed according to the test standard specified in the rule.

5. In § 790.60, by revising paragraph (a)(8) to read as follows:

§ 790.60 Contents of consent agreements.

(a) * * *

(8) Schedules with reasonable deadlines for submitting interim progress and/or final reports to EPA.

* * * * *

6. In § 790.62, by revising paragraphs (a), (b)(9), and (c)(1), and by adding paragraph (c)(4) to read as follows:

§ 790.62 Submission of study plans and conduct of testing.

(a) *Timing of submission.* The principal sponsor of testing conducted pursuant to a consent agreement shall submit a study plan no later than 45 days prior to the initiation of testing.

(b) * * *

(9) Study protocol, including the rationale for any combination of test protocols; the rationale for species/strain selection; dose selection (and supporting data); route(s) or method(s) of exposure; description of diet to be used and its source, including nutrients and contaminants and their concentrations; for *in vitro* test systems, a description of culture medium and its source; and a summary of expected spontaneous chronic diseases (including tumors), genealogy, and life span.

* * * * *

(c) * * *

(1) Upon receipt of a study plan, EPA will review it to determine whether it complies with paragraph (b) of this section. If EPA determines that the study plan does not comply with paragraph (b) of this section, EPA will notify the submitter that the plan is incomplete and will identify the deficiencies and the steps necessary to complete the plan. It is the responsibility of the test sponsor to review the study protocols to determine if they comply with all the mandatory testing conditions and requirements in the test standards (i.e., "shall statements").

* * * * *

(4) The test sponsor shall submit any amendments to study plans to the Director, Office of Compliance Monitoring at the address specified in § 790.5(d).

7. In § 790.68, by revising paragraphs (b)(1), (b)(2)(iii), and (b)(iv)(D), and adding paragraph (c) to read as follows:

§ 790.68 Modification of consent agreements.

* * * * *

(b) * * *

(1) Any test sponsor who wishes to modify the test standard or schedule for any test required under a consent order must submit an application in accordance with this paragraph. Application for modification must be made in writing to the Director, Office of Compliance Monitoring at the address in § 790.5(d) or by phone, with written confirmation to follow within 10 working days. Applications must include an appropriate explanation of why the modification is necessary. EPA will consider only those applications that request modifications to mandatory testing conditions or requirements (i.e., "shall statements" in the consent order). Where a test sponsor requests EPA to provide guidance or to clarify a non-mandatory testing requirement (i.e., "should statements"), the test sponsor should submit these requests to EPA at the address in § 790.5(b).

(2) * * *

(iii) Where, in EPA's judgment, the requested modification of a test standard or schedule would significantly alter the scope of the test or significantly change the schedule for completing the test, EPA will publish a notice in the **Federal Register** requesting comment on the proposed modification. However, EPA will approve a requested modification of a test standard under paragraph (b)(2)(iii) of this section without first seeking public comment if EPA believes that an immediate modification to the test standard is

necessary to preserve the accuracy or validity of an ongoing test. EPA also may modify a testing requirement or test condition in a test standard if EPA determines that the completion or achievement of this requirement or condition is not technically feasible. EPA may approve a requested modification of a test schedule under paragraph (b)(2)(iii) of this section without first seeking public comment if EPA determines, on a case-by-case basis, that a delay of over 12 months is not the fault of the test sponsor and is due to unforeseen circumstances such as a lack of laboratory availability, lack of availability of suitable test substance (e.g., 14–C labelled test substance), lack of availability of healthy test organisms, or the unexpected failure of a long-term test. EPA will publish an annual notice in the **Federal Register** announcing the approval of any test standard modifications and test scheduled extensions under paragraph (b)(2)(iii) of this section, and provide a brief rationale of why the modification was granted.

(iv) * * *

(D) Except as provided in paragraph (b)(2)(iii) of this section, extend the final reporting deadline more than 12 months from the date specified in the consent order.

(c) *Timing.* (1) Test sponsors should submit all applications for test schedule modifications at least 60 days before the reporting deadline for the test in question.

(2) EPA will not normally approve any test schedule extensions submitted less than 30 days before the reporting deadline for the test in question.

(3) Except as provided in paragraph (b)(2)(iii) of this section, EPA may grant extensions as shown necessary for up to 1 year but will normally limit extensions to a period of time equal to the in-life portion of the test plus 60 days.

(4) EPA will normally approve only one deadline extension for each test.

(5) Test sponsors should submit requests for test standard modifications as soon as they determine that the test cannot be successfully completed according to the test standard specified in the consent order.

8. In § 790.82, by revising paragraph (a) to read as follows:

§ 790.82 Content of exemption application.

* * * * *

(a) The identity of the test rule, the chemical identity, and the CAS No. of the test substance on which the application is based.

* * * * *

[FR Doc. 89–20580 Filed 8–31–89; 8:45 am]

BILLING CODE 6560–50–M

DEPARTMENT OF TRANSPORTATION

Coast Guard

46 CFR Parts 56 and 164

[CGD 86–035]

RIN 2115–AC32

Prohibition of Asbestos-Containing Construction Materials

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is revising the approval specification for noncombustible materials to delete references to asbestos as an acceptable noncombustible material for the construction of merchant vessels, and to update the list of designated testing laboratories for noncombustible materials. It is also deleting references to asbestos gaskets from the regulations on piping systems. The Coast Guard no longer issues approvals for asbestos-containing structural fire protection materials, and does not permit the use of such materials in merchant vessel construction. The action taken under this docket makes the regulations consistent with established Coast Guard practice.

EFFECTIVE DATE: October 2, 1989.

FOR FURTHER INFORMATION CONTACT: Mr. Klaus Wahle, Office of Marine Safety, Security, and Environmental Protection, (202) 267–1444.

SUPPLEMENTARY INFORMATION: Coast Guard regulations require the construction of sections of certain types of commercial vessels to be of approved structural fire protection materials. The materials approval specifications are contained in subchapter Q of title 46 CFR. Materials which have complied with the applicable provisions of these specifications are issued Certificates of Approval.

Traditionally, many materials approved for fire protection purposes have contained asbestos. As the health hazards of asbestos became known, manufacturers of structural fire protection materials switched from producing asbestos-containing materials to asbestos-free substitutes. Now, no asbestos-containing materials are used.

A notice of proposed rulemaking was published in the **Federal Register** on December 1, 1988 (53 FR 48558), inviting comments for 45 days ending January 17, 1989. No comments were received during the comment period.

The approval specification for noncombustible materials, 46 CFR 164.009, is being revised to formally remove references to asbestos as an acceptable structural fire protection material. Additionally, this rulemaking updates the list of designated laboratories contained in § 164.009–1.

The Coast Guard is also revising 46 CFR 56.25–15, to delete reference to asbestos-metallic gaskets for high temperature or high pressure piping systems. The notice of proposed rulemaking had proposed deletion of asbestos-metallic gaskets, leaving only metal as suitable gasket material.

After the closing of the public comment period a comment was received indicating that suitable asbestos-free nonmetallic gaskets are now commercially available. In order to enable the industry to avail itself of the widest possible source of gaskets, the regulations have been revised to permit either metallic or suitable asbestos-free nonmetallic gaskets for high temperature and high pressure pipe.

Drafting information

The principal persons involved in drafting this proposal are: Mr. Klaus Wahle, Project Manager, and Lieutenant Commander Don. M. Wrye, Project Attorney, Office of Chief Counsel.

Regulatory Evaluation

This final rule is considered to be non-major under Executive Order 12291 and nonsignificant under DOT regulatory policies and procedures (44 FR 11034, February 26, 1979). References to asbestos and asbestos-containing materials as acceptable for use in vessel construction and as gasket material are simply being deleted, and the list of designated testing laboratories for noncombustible materials updated. Since the use of asbestos is now obsolete, and asbestos-free substitutes are readily available, the economic impact on vessel construction or replacement of gaskets has been found to be minimal. Because the economic impact of this rulemaking is expected to be so minimal, the Coast Guard certifies that it will not have a significant impact on a substantial number of small entities.

Paperwork Reduction Act

These regulations do not contain any information collection or recordkeeping requirements.

Environmental Analysis

These regulations have been thoroughly reviewed by the Coast Guard and have been determined to be categorically excluded from further environmental documentation in accordance with section 2.B.2. of Commandant Instruction (COMDTINST) M16475.1B.

Federalism

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that these regulations do not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

List of Subjects

46 CFR Part 56

Reporting and recordkeeping requirements, Vessels.

46 CFR Part 164

Fire prevention, Marine safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, Chapter I of Title 46, Code of Federal Regulations is amended as follows:

PART 56—PIPING SYSTEMS AND APPURTENANCES

1. The authority citation for part 56 continues to read as follows:

Authority: 33 U.S.C. 1321(j), 1509; 43 U.S.C. 1333; 46 U.S.C. 3306, 3703, 5515; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 793; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

2. In § 56.25–15, paragraphs (b) and (c) are revised to read as follows:

§ 56.25–15 Gaskets (reproduces 108.4).

* * * * *

(b) Only metallic and suitable asbestos-free nonmetallic gaskets may be used on flat or raised face flanges if the expected normal operating pressure exceeds 720 pounds per square inch or the operating temperature exceeds 750 °F.

(c) The use of metal and nonmetallic gaskets is not limited as to pressure provided the gasket materials are suitable for the maximum fluid temperatures.

PART 164—MATERIALS

3. The authority citation for part 164 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703, 4104, 4302; E.O. 12234, 45 FR 58801, 3 CFR, 1960 Comp., p. 277; 49 CFR 1.46.

4. In § 164.009–1, paragraph (b) is revised to read as follows:

§ 164.009–1 General.

* * * * *

(b) The test and measurements described in this subpart are conducted by a laboratory designated by the Commandant. The following laboratories are so designated:

Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062

Dantest, National Institute for Testing and Verification, Amager Boulevard 115, DK 2300 Copenhagen S., Denmark

§ 164.009–3 [Removed]

5. Section 164.009–3 is removed.

§ 164.009–5 [Redesignated as § 164.009–3]

6. Section 164.009–5 is redesignated as § 164.009–3 and revised to read as follows:

§ 164.009–3 Noncombustible materials not requiring specific approval.

The following noncombustible materials may be used in merchant vessel construction though not specifically approved under this subpart:

(a) Sheet glass, block glass, clay, ceramics, and uncoated fibers.

(b) All metals, except magnesium and magnesium alloys.

(c) Portland cement, gypsum, and magnesite concretes having aggregates of only sand, gravel, expanded vermiculite, expanded or vesicular slags, diatomaceous silica, perlite, or pumice.

(d) Woven, knitted or needle punched glass fabric containing no additives other than lubricants not exceeding 2.5 percent.

Dated: August 10, 1989.

J.D. Sipes,

Rear Admiral, U.S. Coast Guard, Chief, Office of Marine Safety, Security and Environmental Protection.

[FR Doc. 89–20679 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–14–M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 88–603; RM–6455]

Radio Broadcasting Services; Hot Springs Village, AR

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document allows FM Channel 225A to Hot Springs Village, Arkansas, as that community's first local broadcast service, in response to a petition for rule making filed on behalf of Caddo Broadcasting. See 54 FR 4862, January 31, 1989. Coordinates utilized for Channel 225A at Hot Springs Village are 34–40–19 and 92–59–55. With this action, the proceeding is terminated.

DATES: Effective October 10, 1989; The window period for filing applications on Channel 225A at Hot Springs Village, Arkansas, will open on October 11, 1989, and close on November 9, 1989.

FOR FURTHER INFORMATION CONTACT: Nancy Joyner, Mass Media Bureau (202) 634–6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 88–603, adopted August 7, 1989, and released November 9, 1989. The full text of this Commission decision 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 of this decision may also be purchased from the Commission's copy contractors, International Transcription Service, (202) 857–3800, 2100 M Street NW., Suite 40, Washington, DC 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

47 CFR 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 is amended under Arkansas, by adding Hot Springs Village, Channel 225A.

Federal Communications Commission.

Karl A. Kensinger,

Chief, Allocations Branch Policy and Rules Division Mass Media Bureau.

[FR Doc. 89–20565 Filed 8–31–89; 8:45 am]

BILLING CODE 6712–01–M

Proposed Rules

Federal Register
Vol. 54, No. 169
Friday, September 1, 1989

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 39

[Docket No. 89-CE-12-AD]

Airworthiness Directives; Beech 90 and 100 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This Notice proposes to adopt a new Airworthiness Directive (AD) applicable to certain Beech Models 65-90, 65-A90, 65-A90-1, 65-A90-2, 65-A90-3, 65-A90-4, B90, C90, C90A, E90, 100, A100, and B100 airplanes which would supersede AD 87-23-09 and AD 70-25-04. The superseded AD's currently require repetitive inspections of the wing main spar lower cap and associated structure. This amendment would incorporate those portions of the superseded AD's which remain valid, and would correct certain minor editorial errors.

DATES: Comments must be received on or before October 16, 1989.

ADDRESSES: Beech Structural Inspection and Repair Manual (SIRM) P/N 98-39006, Revision A4, dated May 1, 1987, applicable to this AD may be obtained from Beech Aircraft Corporation, Commercial Service, Department 52, P.O. Box 85, Wichita, Kansas 67201-0085. Aviadesign Engineering Order E.O. B-8001, Issue 3, dated May 30, 1985, may be obtained from Western Aircraft Maintenance, 4444 Aeronca Street, Boise, Idaho 83705. This information also may be examined at the Rules Docket at the address below. Send comments on the proposal in triplicate to the Federal Aviation Administration, Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 89-CE-12-AD, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106. Comments may be inspected at this location between 8 a.m. and 4 p.m., Monday through Friday, Holidays excepted.

FOR FURTHER INFORMATION CONTACT: Don Campbell, Aerospace Engineer, Airframe Branch, ACE-120W, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone (316) 946-4409.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments specified above will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received. Comments are specifically invited on the overall regulatory, economic, environmental and energy aspects of the proposed rule. All comments submitted will be available both before and after the closing date for comments in the Rules Docket for examination by interested persons. A report summarizing each FAA public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Availability of NPRMs

Any person may obtain a copy of this Notice of Proposed Rulemaking (NPRM) by submitting a request to the Federal Aviation Administration, Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 89-CE-12-AD, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

Discussion

AD 87-23-09, Amendment No. 39-5765, published in the **Federal Register** on November 12, 1987 (52 FR 43318), requires inspection of the wing main spar lower cap and attach fittings for fatigue cracks. When this AD was promulgated, certain serial numbers of the Beech Model 65-90 were omitted from the effectivity because the airplanes were already being repetitively inspected per AD 70-25-04, Amendment No. 39-1332, published in the **Federal Register** on November 12, 1971 (36 FR 21668). For reasons discussed below, AD 70-25-04 is considered obsolete. It relies on an outdated Beech Service Instruction (No. 0394-018) for inspection criteria. These improved criteria are now available in the Beech Structural Inspection and Repair Manual (SIRM). Certain portions of the SIRM have been made mandatory by AD 87-23-09 for all 90 Series airplanes except Serials LJ-1 through LJ-67. The SIRM inspections are known to be effective in that at least 20 cracked wing spar components have been found by these inspections since September, 1983, out of the entire fleet of approximately 1550 airplanes. These inspections have been performed by Beech-trained personnel using state-of-the-art methods. This contrasts against the inspection methods in AD 70-25-04, which have found no cracks since September, 1979, in the fleet of 67 airplanes, applying the outdated inspection criteria and not necessarily utilizing Beech-trained personnel. Additional cause for requiring improved inspections on these 67 airplanes is that the wing lower forward attach fittings are not as durable as the improved fittings on airplanes having serial numbers LJ-68 and higher. The likelihood of cracks occurring in the attach fittings of these 67 airplanes is probably higher than for the remaining fleet. The likelihood of spar cap cracks would be about the same as for the remaining fleet. Since the remaining fleet is already protected by AD 87-23-09, the first 67 airplanes should be offered the same protection.

Another deficiency of AD 70-25-04 is that it calls for inspection of the wing skin adjacent to the attach fitting for cracks, and requires further inspections only if skin cracks are found. Since skin cracks are not an indicator of, and in fact are not related to, the condition of the attach fitting or spar cap, the straight-forward fitting and spar cap inspection methods in the SIRM are much preferred.

Based on the above discussion, it is proposed that AD's 87-23-09 and 70-25-04 be superseded by a new AD which follows the inspection requirements of AD 87-23-09. Also, the mailing address on the reporting form included in AD 87-23-09 would be changed and an omission in paragraph (e) of AD 87-23-09 will be corrected by adding a

reference to Beech Wing Modification Kit No. 100–4007–1S.

Since the condition described in likely to exist or develop in other Beech 90 Series Airplanes of the same design, the proposed AD would require inspection of the wing main spar structure in accordance with the Beech SIRM. The FAA has determined there are approximately 1617 airplanes affected by the proposed AD. The cost of inspecting these airplanes in accordance with the proposed AD is estimated to be the same as already required by AD's 87–23–09 and 70–25–04. Therefore, the proposed revision has no economic impact on the private sector.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism duplications to warrant the preparation of a Federalism Assessment. Therefore, I certify that this action (1) Is not a "major rule" under the provisions of Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action has been placed in the public docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend § 39.13 of 14 CFR part 39 of the FAR as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983); and 14 CFR 11.85.

§ 39.13 [Amended]

2. By superseding AD 87–23–09 Amendment Number 39–5765 and AD 70–25–04, Amendment Number 39–1332 with the following new AD:

Beech: Applies to Models 65–90 and 65–A90 (S/N LJ–1 thru LJ–317); 65–A90–1, 65–A90–2, 65–A90–3, 65–A90–4, B90, C90 (all S/N); C90A (S/N LJ–1063 thru LJ–1087, except LJ–1085); E90, 100, A100 and B100 (all S/N) airplanes certificated in any category.

Compliance: Required as indicated after the effective date of this AD, unless already accomplished.

To detect possible fatigue cracking of the wing main spar lower cap and associated structure, accomplish the following:

(a) Within the next 200 hours time-in-service (TIS), after the effective date of this AD, or upon accumulating 3000 hours TIS, whichever occurs later, unless previously accomplished per Ad 87–23–09, Amendment 39–5765, or AD 70–25–04, Amendment 39–1332, and thereafter at intervals not to exceed 1000 hours TIS (except as provided in paragraph (b) below) after the initial inspection, inspect the wing lower forward spar attach fittings, center section and outboard wing spar caps adjacent to the attach fittings by visual, fluorescent penetrant and eddy current methods as specified in the applicable section of Beech Structural Inspection and Repair Manual (SIRM), P/N 98–39006, Revision A4, dated May 1, 1987. The inspection must be performed by personnel specifically trained by Beech Aircraft Corporation.

Note 1. Beech offers a two-day training course free of charge to qualified personnel who have prior knowledge of eddy current inspection techniques. A listing of Beech Corporate maintenance facilities may be obtained from the sources contained in paragraph (h) of this AD. A listing of other facilities employing qualified inspectors is not available.

(b) At each inspection required by paragraph (a) above, inspect any reinforcing strap installed per Supplemental Type Certificate (STC) SA1178CE or SA1583CE for proper tension and condition in accordance with Aviadesign Engineering Order E.O. B–8001, Issue 3, dated May 30, 1985. Correct any discrepancy prior to further flight. For airplanes so equipped and inspected, the repetitive inspection interval of 1000 hours TIS in paragraph (a) above may be extended to 3000 hours TIS.

(c) If any crack is found in a main spar lower cap or fitting, prior to further flight repair or replace the defective part using the instructions and limitations specified in the Beech SIRM or other FAA approved instructions provided by Beech Aircraft Corporation.

(d) Within one week after completion of any inspection required by paragraph (a) or (b) of this AD, complete the reporting form included with this AD as Figure 1 and mail it to the address shown thereon (Reporting approved by the Office of Management and Budget under OMB No. 2120–0056).

(e) The initial and repetitive inspections specified in this AD are no longer required when the airplane is modified by Beech Wing Modification Kit No. 90–4077–1S or 100–4007–1S.

(f) Airplanes may be flown in accordance with FAR 21.197 to a location where this AD can be accomplished.

(g) An alternate method of compliance or adjustment of the initial or repetitive compliance times, which provides an equivalent level of safety, may be approved by the Manager, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone (316) 946–4400.

Note 2: The request should be forwarded through an FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita Aircraft Certification Office, at the above address.

All persons affected by this directive may obtain copies of the documents referred to herein upon request to the Beech Aircraft Corporation, Commercial Service, Department 52, Wichita, Kansas 67201–0085, or Western Aircraft Maintenance, 4444 Aeronca Street, Boise, Idaho 83705, or examined at the FAA, Office of the Assistant Chief Counsel, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

This amendment supersedes AD 87–23–09, Amendment 39–5765, and Ad 70–25–04, Amendment 39–1332.

Issued in Kansas City, Missouri, on August 23, 1989.

Barry D. Clements,

Manager, Small Airplane Directorate Aircraft Certification Service.

Figure 1

Reporting Form

Airplane Model No. _____
Airplane Serial No. _____
Date of inspection per this AD _____
Airframe total hours time-in-service _____
Were any fatigue cracks found?
No_____
Yes_____
If "Yes" was checked above, complete the following:
Location of crack _____

Was crack removable by reaming or grinding?
No_____
Yes_____
Additional Comments _____

Mailing Address:
FAA, Wichita ACO
Airframe Branch, Room 100
1801 Airport Road
Wichita, KS 67209

[FR Doc. 89–20617 Filed 8–31–89; 8:45 am]
BILLING CODE 4910–13–M

14 CFR Part 39

[Document No. 89–CE–18–AD]

Airworthiness Directives; Beech 65–80 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This Notice proposes to adopt a new Airworthiness Directive (AD), applicable to certain Beech Models 65, 65-80, 65-A80 and 65-B80 airplanes, which would supersede AD 70-25-01, Amendment 39-1609. The FAA has determined that improved inspection criteria is available that will enhance the effectiveness of the required inspections. The proposed AD incorporates this new criteria.

DATES: Comments must be received on or before October 16, 1989.

ADDRESSES: Beech Structural Inspection and Repair Manual (SIRM) P/N 98-39006, Revision A4, dated May 1, 1987, applicable to this AD, may be obtained from the Beech Aircraft Corporation, Commercial Service, Department 52, P.O. Box 85, Wichita, Kansas 67201-0085. Aviadesign Engineering Order E.O. B-8001, Issue 3, dated May 30, 1985, may be obtained from Western Aircraft Maintenance, 4444 Aeronca Street, Boise, Idaho 83705. This information also may be examined at the Rules Docket at the address below. Send comments on the proposal in triplicate to the Federal Aviation Administration, Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 89-CE-18-AD, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106. Comments may be inspected at this location between 8 a.m. and 4 p.m., Monday through Friday, holidays excepted.

FOR FURTHER INFORMATION CONTACT: Don Campbell, Aerospace Engineer, Airframe Branch, ACE-120W, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone (316) 946-4409.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments specified above will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received. Comments are specifically invited on the overall regulatory, economic, environmental and energy aspects of the proposed rule. All comments submitted will be available both before and after the closing date for comments in the Rules Docket for examination by interested persons. A report summarizing each FAA public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Availability of NPRMs

Any person may obtain a copy of this Notice of Proposed Rulemaking (NPRM) by submitting a request to the Federal Aviation Administration, Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 89-CE-18-AD, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

Discussion

AD 70-25-01, Amendment 39-1609, published in the **Federal Register** on March 22, 1973 (38 FR 7451), requires inspections for fatigue cracking of the wing main spar lower cap and attach fittings on certain Beech 65-80 Series airplanes. AD 70-25-01 relies on an obsolete Beech Service Instruction (No. 0393-018) for the inspection criteria. Improved criteria are now available in the Beech Structural Inspection and Repair Manual (SIRM). The SIRM methods have been available for Beech 90 and 100 Series airplanes since September 1986, and are known to be effective. The criteria in AD 70-25-01 has also been used for the 90 Series airplanes, and have been found not to be as effective as the SIRM methods. Therefore, the FAA has determined that the methods in the SIRM should be used in lieu of the AD 70-25-01 criteria. In addition, AD 70-25-01 currently calls for inspections of the wing skin adjacent to the attach fitting for cracks, and requires further inspections only if skin cracks are found. The FAA has determined that skin cracks are not an indicator of, and in fact are not related to, the condition of the attach fitting or spar cap and that the straight-forward fitting and spar cap inspection methods specified in the SIRM should be utilized.

Therefore, the FAA proposes to supersede AD 70-25-01 with a new AD based on the SIRM inspection methods. The proposed AD is similar to that in effect for the Beech 90 and 100 Series, except for the training requirements for inspection personnel. The need for special training is not warranted by the service history for the 65-80 Series as it is for the 90 and 100 Series since only five cracked wing attach fittings have been found throughout the history of the 65-80 Series and no spar cap cracks have been found. AD 70-25-01 is effective at 3,000 hours time-in-service (TIS) for Models 65-80 and 65-A80 airplanes, and at 5,000 hours TIS for Models 65 and 65-B80 airplanes. The same effectivity is proposed in the superseding AD. The inspection interval in AD 70-25-01 is 500 hours TIS, decreasing to 300 hours TIS if skin cracks appear. A 1,000 hour TIS inspection interval is proposed for the superseding AD, and skin crack inspections are not included. As in the case of the AD on the Beech 90 and 100 Series, the inspection interval is lengthened to 3,000 hours TIS if a reinforcing strap is installed per STC SA1583CE and maintained with proper tension. The supersedure is therefore relaxatory.

Since the condition described is likely to exist or develop in other Beech 65-80 Series airplanes of the same design, the proposed AD would require inspections of the wing main spar structure in accordance with the Beech SIRM. The FAA has determined there are approximately 739 airplanes affected by the proposed AD. The cost of inspecting these airplanes in accordance with the proposed AD is estimated to be less than that required by AD 70-25-01. Therefore, the proposed revision has no additional economic impact on the private sector.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. Therefore, I certify that this action (1) is not a "major rule" under the provisions of Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action has been placed in the public docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **"ADDRESSES".**

List of Subparts in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator,

the Federal Aviation Administration proposes to amend § 39.13 of part 39 of the FAR as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. By superseding AD 70–25–01, Amendment Number 39–1609, with the following new AD:

Beech: Applies to Models 65 (serial numbers (S/N) L–1, L–2, L–6, LF–7 through LF–76, and LC–1 through LC–180); 65–80 and 65–A80 (S/N LD–1 through LD–244); 65–A80 (S/N LD–245 through LD–269) when Beech Modification Kit No. 80–4004–1 or –3 is installed; and 65–B80 (all S/N) airplanes certificated in any category.

Compliance: Required as indicated after the effective date of this AD, unless already accomplished.

To detect possible fatigue cracking of the wing main spar lower cap and associated structure, accomplish the following:

(a) Within 200 hours time-in-service (TIS) after the effective date of this AD, or upon accomplishing 3000 hours TIS on Models 65–80 and 65–A80 airplanes, or upon accumulating 5000 hours TIS on Models 65 and 65–B80 airplanes, whichever occurs later, and thereafter at intervals not to exceed 1000 hours TIS (except as provided in paragraph (b) below) after the initial inspection, inspect the wing lower forward spar attach fittings, center section and outboard wing spar caps adjacent to the attach fittings by visual, fluorescent penetrant and eddy current methods as specified in the applicable section of Beech Structural Inspection and Repair Manual (SIRM), P/N 98–39006, Revision A4, dated May 1, 1987.

Note 1: Beech offers a two-day training course free of charge to qualified personnel who have prior knowledge of eddy current inspection techniques. A listing of Beech Corporate maintenance facilities may be obtained from the sources identified in paragraph (f) of this AD. A listing of other facilities employing qualified inspectors is not available.

(b) At each inspection required by paragraph (a) above, inspect any reinforcing strap installed per Supplemental Type Certificate (STC) SA1583CE for proper tension and condition in accordance with Aviadesign Engineering Order E.O. B–8001, Issue 3, dated May 30, 1985. Correct any discrepancy prior to further flight. For airplanes equipped with STC SA1583CE and inspected in accordance with paragraph (a) above, the repetitive inspection interval of 1000 hours TIS in paragraph (a) above may be extended to 3000 hours TIS.

(c) If any crack is found in a main spar lower cap or fitting, prior to further flight repair or replace the defective part using the instructions and limitations specified in the SIRM or other FAA approved instructions provided by Beech Aircraft Corporation.

(d) Airplanes may be flown in accordance with FAR 21.197 to a location where this AD can be accomplished.

(e) An alternate method of compliance or adjustment of the initial or repetitive compliance times, which provides an equivalent level of safety, may be approved by the Manager, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Room 100, Wichita, Kansas 67209; Telephone (316) 946–4400.

Note 2: The request should be forwarded through an FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita Aircraft Certification Office, at the above address. All persons affected by this directive may obtain copies of the documents referred to herein upon request to the Beech Aircraft Corporation, Commercial Service, Department 52, P.O. Box 85, Wichita, Kansas 67201–0085; or Western Aircraft Maintenance, 4444 Aeronca Street, Boise, Idaho 83705; or these documents may be examined at the FAA, Office of the Assistant Chief Counsel, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106.

This amendment supersedes AD 70–25–01, Amendment 39–1609 .

Issued in Kansas City, Missouri on August 23, 1989.

Barry D. Clements,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 89–20618 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–13–M

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14 CFR Part 39

[Docket No. 89–NM–161–AD]

Airworthiness Directives; Boeing of Canada, Ltd., de Havilland Division, Model DHC–7 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to adopt a new airworthiness directive (AD), applicable to all de Havilland Model DHC–7 series airplanes, which would require a visual inspection for loose rivets, low frequency ultrasonic inspection for disbonding of unriveted stringers on fuselage skins, and repair, if necessary. This proposal is prompted by a recent report of disbonding found during routine inspection in a waffle doubler/belly skin. This condition, if not corrected, could lead to reduced structural capability of the fuselage and subsequent decompression of the airplane.

DATES: Comments must be received no later than October 23, 1989.

ADDRESSES: Send comments on the proposal in duplicate to the Federal Aviation Administration, Northwest Mountain Region, Transport Airplane Directorate, ANM–103, Attention: Airworthiness Rules Docket No. 89–NM–161–AD, 17900 Pacific Highway South, C–68966, Seattle, Washington 98168. The applicable service information may be obtained from Boeing of Canada, Ltd., de Havilland Division, Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or the FAA, New England Region, New York Aircraft Certification Office, 181 South Franklin Avenue, Valley Stream, New York.

FOR FURTHER INFORMATION CONTACT: Mr. Anthony Socias, Airframe Branch, ANE–172; telephone (516) 791–6220. Mailing Address: FAA, New England Region, New York Aircraft Certification Office, 181 South Franklin Avenue, Valley Stream, New York 11581.

SUPPLEMENTARY INFORMATION: Interested persons are invited to participate in the making of the proposed rule 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 specified above will be considered by the Administrator before taking action on the proposed rule. The proposals contained in this Notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA/public contact, concerned with the substance of this proposal, will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this Notice must submit a self-addressed, stamped post card on which the following statement is made: "Comments to Docket Number 89–NM–167–AD." The post card will be date/time stamped and returned to the commenter.

Discussion

Transport Canada, which is the airworthiness authority of Canada, in accordance with existing provisions of a bilateral airworthiness agreement, has notified the FAA of an unsafe condition

which may exist on de Havilland Model DHC–7 series airplanes. There has been a recent report of disbonding found during a routine inspection in a waffle doubler/belly skin. The disbonding is not attributed to prior damage and is currently under investigation by the manufacturer. This condition, if not corrected, could lead to reduced structural capability of the fuselage and subsequent decompression of the airplane.

Boeing of Canada, Ltd., de Havilland Division, has issued Service Bulletin 7–53–33, Revision A, dated June 9, 1989, which describes procedures for a visual inspection for loose rivets and low frequency ultrasonic testing to check for disbonding of unriveted stringers on fuselage skins, between the flight compartment bulkhead and the passenger door/emergency exit areas, and repair, if necessary. Transport Canada has classified this service bulletin as mandatory, and has issued Airworthiness Directive No CF–89–07 addressing this subject.

This airplane model is manufactured in Canada and type certificated in the United States under the provisions of § 21.29 of the Federal Aviation Regulations and the applicable bilateral airworthiness agreement.

Since this condition is likely to exist or develop on other airplanes of the same type design registered in the United States, an AD is proposed which would require a visual inspection for loose rivets and low frequency ultrasonic testing to check for disbonding of unriveted stringers on fuselage skins, and repair, if necessary, in accordance with the service bulletin previously described. In addition, operators would be required to submit a report of their inspection findings to the FAA, Transport Canada, and the manufacturer.

This is considered to be interim action. The manufacturer is currently attempting to determine the extent and nature of the addressed damage, and is developing an appropriate repetitive inspection schedule and/or modification that will preclude the need for repetitive inspections. Once these are developed, the FAA may consider further rulemaking to revise this AD to require additional necessary actions.

Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96–511) and have been assigned OMB Control Number 2120–0056.

It is estimated that 42 airplanes of U.S. registry would be affected by this AD, that it would take approximately 36 manhours per airplane to accomplish the required actions, and that the average labor cost would be $40 per manhour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $60,480.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation Safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR Part 39 of the Federal Aviation Regulations as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97–449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Boeing of Canada, LTD., De Havilland Division: Applies to all Model DHC–7 series airplanes, certificated in any category. Compliance is required as indicated, unless previously accomplished.

To prevent reduced structural capability of the fuselage and subsequent decompression of the airplane, accomplish the following:

A. Within 30 days after the effective date of this AD, perform the following inspections and repair, in accordance with de Havilland Service Bulletin 7–53–33, Revision A, dated June 9, 1989:

1. Perform a low frequency ultrasonic inspection for disbonding of the fuselage belly skin doublers, between fuselage stations X248.00 and X535.25 below stringer 20 left and right, in accordance with Inspection Part A of the service bulletin.

2. Visually inspect for looseness or working of the rivets in the vertical skin joints, at fuselage stations X535.25 and X576.25 below stringer 20, left and right.

3. Visually inspect for looseness or working of the rivets in the fuselage skin joints at station X630.00 around the complete periphery of the fuselage, above and below the passenger and emergency exit doors.

4. Visually inspect for looseness or working of the rivets in the skin longitudinal joint between fuselage stations X424.00 to X484.00 along stringer 20, left and right. Pay particular attention to the lower line of rivets.

5. Repair all loose rivets prior to further flight, in a manner approved by the Manager, New York Aircraft Certification Office, ANE–170, FAA, New England Region.

6. Repair all disbonding prior to further flight, in accordance with the service bulletin.

B. Within 90 days after the effective date of this AD:

1. Perform a low frequency ultrasonic inspection for disbonding of the fuselage left and right sidewall skin doublers, between fuselage stations X248.00 and X596.75, between stringer 20 and 10, in accordance with de Havilland Service Bulletin 7–53–33, Revision A, dated June 9, 1989.

2. Repair any disbonding prior to further flight, in accordance with the service bulletin.

C. Within 150 days after the effective date of this AD:

1. Perform a low frequency ultrasonic inspection for disbonding of the fuselage roof skin doublers between fuselage stations X248.00 and X630.00, between stringer 10, left and right, in accordance with de Havilland Service Bulletin 7–53–33, Revision A., dated June 9, 1989.

2. Repair any disbonding prior to further flight, in accordance with the service bulletin.

D. Within 3 days after accomplishing each of the inspections required by paragraphs A., B., and C., above, report all findings, positive or negative, to the Director, Airworthiness Branch, Transport Canada, Ottawa, Canada; to the manufacturer, Boeing of Canada, Ltd., de Havilland Division, in accordance with de Havilland Service Bulletin 7–53–33, Revision A, dated June 9, 1989; and to the FAA, Manager, New York Aircraft Certification Office, ANE–170, New England Region.

E. An alternate means of compliance or adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, New York Aircraft Certification Office, ANE–170, FAA, New England Region.

NOTE: The request should be forwarded through an FAA Principal Maintenance Inspector (PMI), who will either concur or comment, and then send it to the Manager, New York Aircraft Certification Office, ANE–170.

F. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of this AD.

All persons affected by this directive who have not already received the appropriate service documents from the manufacturer may obtain copies upon request to Boeing of Canada, Ltd., de Havilland Division, Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. These documents may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or New York Aircraft Certification Office, FAA, New England Region, 181 South Franklin Avenue, Valley Stream, New York.

Issued in Seattle, Washington, on August 23, 1989.

Leroy A. Keith,

Manager, Transport Airplane Directorate Aircraft Certification Service.

[FR Doc. 89-20615 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-13-M

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14 CFR Part 39

[Docket No. 89-NM-154-AD]

Airworthiness Directives; Fokker Model F-27 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to revise an existing airworthiness directive (AD), applicable to Fokker Model F-27 Series Airplanes, which currently requires a one-time inspection of both the right and left upper nacelle brace struts, and replacement of struts if the struts are found with self-tapping screws. This action would expand the applicability of the existing AD to include additional affected airplanes. This proposal is prompted by discovery of brace struts with self-tapping screws on an airplane which was not included in the existing AD. This condition, if not corrected, could result in engine separation and subsequent structural damage to the airplane aft of the engine.

DATES: Comments must be received no later than October 23, 1989.

ADDRESSES: Send comments on the proposal in duplicate to Federal Aviation Administration, Northwest Mountain Region, Transport Airplane Directorate, ANM-103, Attention: Airworthiness Rules Docket No. 89-NM-154-AD, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168. The applicable service information may be obtained from Fokker Aircraft USA, Inc., 1199 N. Fairfax Street, Alexandria, Virginia 22314. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or the Standardization Branch, 9010 East Marginal Way South, Seattle, Washington.

FOR FURTHER INFORMATION CONTACT: Mark Quam, Standardization Branch, ANM-103; telephone (206) 431-1978. Mailing address: FAA, Northwest Mountain Region, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168.

SUPPLEMENTARY INFORMATION: Interested persons are invited to participate in the making of the proposed rule 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 specified above will be considered by the Administrator before taking action on the proposed rule. The proposals contained in this Notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA/public contact, concerned with the substance of this proposal, will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this Notice must submit a self-address, stamped post card on which the following statement is made: "Comments to Docket Number 89-NM-154-AD." The post card will be date/time stamped and returned to the commenter.

Discussion

On February 6, 1989, the FAA issued AD 89-04-06, Amendment 39-6143 (54 FR 6642; dated February 14, 1989), to require inspection of both the right and left upper nacelle brace struts in accordance with Fokker Service Bulletin F27/54-44, dated July 7, 1988. If any brace strut is found with a self-tapping screw, the brace strut is to be replaced prior to the accumulation of 30,000 landings on the strut, or within the next 500 landings after the AD effective date of the AD (March 28, 1989), whichever occurs later.

That action was prompted by a report of a broken upper nacelle brace strut on Model F-27 which apparently failed due to fatigue cracking that initiated at the hole of a self-tapping screw. The broken brace strut was found to deviate from the production configuration by not having a welded washer with a screw at both ends of the brace strut tube. This condition, if not corrected, could result in engine separation and subsequent structural damage to the airplane aft of the engine.

Since issuance of that AD, brace struts with self-tapping screws were discovered on an airplane which was not included in the applicability of the existing AD (or the effectivity of the applicable service bulletin).

Fokker has now issued Service Bulletin F27/54-44, Revision 1, dated May 19, 1989, which includes Model F-27 airplanes, Serial Numbers 10308 through 10340, and 10342 through 10360, in its effectivity. The RLD has classified this revised service bulletin as mandatory, and has issued Netherlands Airworthiness Directive BLA No. 88-44, Issue 2, dated June 16, 1989.

This airplane model is manufactured in the Netherlands and type certificated in the United States under the provisions of § 21.29 of the Federal Aviation Regulations and the applicable bilateral airworthiness agreement.

Since this condition is likely to exist or develop on other airplanes of the same type design registered in the United States, an AD is proposed which would expand the applicability of AD 89-04-06 to include all affected U.S.-registered airplanes, and reflect Revision 1 of the service bulletin in the requirements of the AD. This action would ensure, for all U.S.-registered airplanes, that a one-time inspection of the right and left upper-nacelle struts, and replacement of struts if found with self-tapping screws, is accomplished in accordance with the service bulletin previously described.

It is estimated that 1 additional airplane of U.S. registry would be affected by this AD, that it would take approximately 4 manhours per airplane to accomplish the required actions, and that the average labor cost would be $40 per manhour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $160.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the

various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR Part 39 of the Federal Aviation Regulations as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by amending Amendment 39-6143 (54 FR 6642; dated February 14, 1989), AD 89-04-06, as follows:

Fokker: Applies to Model F-27 series airplanes, Serial Numbers 10102 through 10307, 10308 through 10340, and 10342 through 10360, certificated in any category Compliance is required as indicated, unless previously accomplished.

To prevent engine separation and subsequent structural damage to the airplane aft of the engine, accomplish the following:

A. For airplanes listed in Fokker Service Bulletin F27/54-44, dated July 7, 1988: Within 60 days after March 28, 1989 (the effective date of AD 89-04-06, Amendment 39-6143), inspect both the right and left upper nacelle brace struts, in accordance with Fokker Service Bulletin F27/54-44, dated July 7, 1988. If any brace strut is found with a self-tapping screw, prior to the accumulation of 30,000 landings on the strut, or within the next 500 landings from May 27, 1989, whichever occurs later, replace the brace strut in accordance with the referenced service bulletin.

B. For airplanes Serial Numbers 10308 through 10340 and 10342 through 10360: Within 60 days after the effective date of this amendment, inspect both the right and left upper nacelle brace struts, in accordance with Fokker Service Bulletin F27/54-44, Revision 1, dated May 19, 1989. If any brace strut is found with a self-tapping screw, prior to the accumulation of 30,000 landings on the strut, or within the next 500 landings after the effective date of this amendment, whichever occurs later, replace the brace strut in accordance with the referenced service bulletin.

C. An alternate means of compliance of adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, Standardization Branch, ANM-113, FAA, Northwest Mountain Region.

Note: The request should be forwarded through an FAA Principal Maintenance Inspector (PMI), who will either concur or comment, and then send it to the Manager, Standardization Branch, ANM-113.

D. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of this AD.

All persons affected by this directive who have not already received the appropriate service documents from the manfacturer may obtain copies upon request to Fokker Aircraft USA, Inc., 1199 N. Fairfax Street, Alexandria, Virginia 22314. These documents may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 17900 Pacific Highway South, Seattle, Washington, or the Standardization Branch, 9010 East Marginal Way South, Seattle, Washington.

Issued in Seattle, Washington, on August 23, 1989.

Leroy A. Keith,

Manager, Transport Airplane Directorate Aircraft Certification Service.

[FR Doc. 89-20616 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-13-M

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14 CFR Part 39

[Docket No. 89-ASW-10]

Airworthiness Directives; McDonnell Douglas Helicopter Company (MDHC) Model 369 Series Helicopters (including the YOH-6A and OH-6A)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to adopt a new airworthiness directive (AD) that would require a one-time inspection of engine-to-transmission driveshaft couplings and removal and replacement with airworthy parts, if necessary, on MDHC Model 369 series helicopters. The proposed AD is needed to prevent failure of engine-to-transmission couplings which could result in loss of control of the helicopter.

DATES: Comments must be received on or before October 16, 1989.

ADDRESSES: Comments on the proposed may be mailed in duplicate to: Regional Rules Docket, FAA, Office of the Assistant Chief Counsel, Fort Worth, Texas 76193-0007, or delivered in duplicate to 4400 Blue Mound Road, Room 158, Building 3B, of the Regional Rules Docket at the above address. Comments must be marked: Docket No. 89-ASW-10. Comments may be inspected at the above location in Room 158 between 8 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

The applicable service information may be obtained from: McDonnell Douglas Helicopter Company, 5000 E. McDowell Road, Attention: Publications Department, MS543/D214, Mesa, Arizona 85205, or may be examined in the Regional Rules Docket.

FOR FURTHER INFORMATION CONTACT: Mr. Roy McKinnon, Aerospace Engineer, ANM-143L, FAA, Los Angeles Aircraft Certification Office, 3229 East Spring Street, Long Beach, California 90806-2425, telephone (213) 988-5247.

SUPPLEMENTARY INFORMATION: Interested persons are invited to participate in the making of the proposed rule 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 specified above will be considered by the FAA before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Office of the Assistant Chief Counsel, FAA, 4400 Blue Mound Road, Room 158, Building 3B, Fort Worth, Texas, for examination by interested persons. A report summarizing each FAA-public contact, concerned with the substance of the proposed AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: Comments to Docket

Number 89–ASW–10. The postcard will be date/time stamped and returned to the commenter.

There have been reports of cracks in the spline area of the engine-to-transmission driveshaft coupling, Part Number (P/N) 369H5660, which may lead to failure of the part on MDHC 369 series helicopters. Failure of this part could result in engine overspeed and loss of power to the main rotor transmission resulting in an unplanned autorotation. Since this condition is likely to exist or develop on other helicopters of the same type design, the proposed AD would require a one-time inspection and replacement of parts, as necessary, to assure no couplings, serial numbers 5200 through 5309, are installed on MDHC Model 369 series helicopters.

The regulations proposed herein would not have a direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this proposed regulation involves approximately 1,000 helicopters with an approximate cost of only $80 per helicopter. Therefore, I certify that this action: (1) Is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal; and (4) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

PART 39—AIRWORTHINESS DIRECTIVES

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend § 39.13 of 14 CFR part 39 of the Federal Aviation Regulations as follows:

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97–449, January 12, 1983); and 14 CFR 11.85.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new AD:

McDonnell Douglas Helicopter Company (MDHC): Applies to Model 369 series helicopters (including Models YOH–6A and OH–6A) certificated in any category.

Compliance required as indicated, unless already accomplished.

To prevent possible failure of the engine-to-transmission driveshaft coupling, which could result in loss of control of the helicopter, accomplish the following:

(a) Within the next 25 hours' time in service or within 120 days after the effective date of the AD, whichever occurs first, inspect the couplings, MDHC Part Number (P/N) 369H5660, to determine serial numbers.

(b) Replace any couplings, P/N 369H5660, which have serial numbers in the range from 5200 through 5309, with airworthy parts.

(c) Record compliance with paragraph (a) of this AD in the AD compliance record and in the maintenance record of the helicopter log book. Record the serial numbers of any deficient couplings found during compliance with this AD.

NOTE: MDHC Service Information Notices HN–216, DN–157, EN–47, FN–35, dated April 5, 1989, pertain to this subject.

(d) In accordance with FAR §§ 21.197 and 21.199, flight is permitted to a base where the requirements of this AD may be accomplished.

(e) An alternate method of compliance or adjustment of the compliance time which provides an equivalent level of safety, may be used if approved by the Manager, Los Angeles Aircraft Certification Office, ANM–100L, FAA, 3229 East Spring Street, Long Beach, California 90806–2425. Note: Unairworthy couplings removed from service and in spares inventory should be marked unairworthy. Unairworthy couplings should be purged from spares inventory in accordance with MDHC SIN HN–216, DN–157, EN–47, FN–35, dated April 5, 1989.

Issued in Fort Worth, Texas, on August 22, 1989.

James D. Erickson,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 89–20609 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 109

[Docket No. 89N–0014]

RIN 0905–AC91

Lead From Ceramic Pitchers

AGENCY: Food and Drug Administration.

ACTION: Proposed rule; reopening of comment period.

SUMMARY: The Food and Drug Administration (FDA) is reopening for 90 days the period for submitting comments on its proposal to establish a regulatory limit for ceramic food-service pitchers, excluding creamers, that would limit the leaching of lead from the glazes and decorations on the food-contact surface of these pitchers to no more than 0.1 microgram per milliliter (μg/mL) of test solution and to consider all decorative ceramicware that appears to be suitable for food use to be for food use unless it is otherwise conspicuously and permanently marked or made unsuitable for food by drilling a hole in the food-contact surface. In addition, the agency is reopening for 180 days the period for submitting comments on the need to decrease leachable lead from other ceramicware and appropriate measures for achieving any needed decrease. FDA is reopening the comment period in response to request from the Coalition for Safe Ceramicware, the European Economic Community, and the Italian Embassy.

DATES: Comments by November 30, 1989, for ceramic pitchers and decorative ceramicware and by February 28, 1990, for all other issues.

ADDRESSES: Written comments to the Dockets Management Branch (HFA–305), Food and Drug Administration, Rm. 4–62, 5600 Fishers Lane, Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Terry C. Troxell, Center for Food Safety and Applied Nutrition (HFF–312), Food and Drug Administration, 200 C St. SE., Washington, DC 20204, 202–485–0229.

SUPPLEMENTARY INFORMATION: In the Federal Register of June 1, 1989 (54 FR 23485), FDA issued a proposed rule that would limit the amount of leachable lead from the glazes and decorations on the food-contact suface of ceramic food-service pitchers, excluding creamers, to no more than 0.1 μg/mL of test solution. The agency proposed this action based on recent toxicology and epidemiology studies on lead which have shown adverse effects in children, including deficits in intelligence and reduced stature, at lead exposure levels that were once thought not to be associated with adverse effects.

The agency further proposed to establish a regulation that would provide that all decorative or ornamental ceramicware that appears to be suitable for food use (i.e., is capable of holding food and may be asumed by the consumer to be for food use) will be deemed to be intended for food use and will be regulated as such unless it is otherwise conspicuously and

permanently marked, "Not for Food Use—May Poison Food," or a hole is bored through the potential food-contact suface of the decorative ceramicware to make it unsuitable for food use.

Finally, the agency requested comments on a variety of concerns regarding lead, including lead toxicity and the provisional tolerable intake range; the leachability of and exposure to lead from a variety of ceramicware under various conditions; the lowest leachable lead levels routinely attainable for various types of ceramicware; the impact of the proposed regulations; and the availability of alternative lead-free glazes and decorations including the leachability of potentially toxic substances from these glazes.

FDA received a request for a 180-day extension of the comment period from a group of ceramicware corporations and associations. They stated that this additional time is needed to address the issues raised and to provide information solicited by FDA in its proposal. They stated that gathering this information will involve complicated, time-consuming research by a number of parties that will take longer to complete than the time originally set aside for comments. FDA also received a request for a 30-day extension from an international federation and for a 77-day extension from a foreign embassy.

Because of the nature of the health concerns regarding lead, the agency believes that there should be no unnecessary delay in establishing an appropriate regulatory limit for ceramic pitchers or for ensuring that decorative ceramicware that is not intended for food use in appropriately identified. However, because of the difficult issues involved, FDA recognizes the need for some additional time to respond. Therefore, the agency is reopening the comment period for 90 days, until November 30, 1989 to respond to the proposal on a reduced limit for leachable lead in pitchers and on the proposed requirements for decorative ceramicware that appears suitable for food use. This will allow sufficient time to respond without causing unnecessary delays.

In addition, FDA believes that good cause has been shown that additional time is needed to gather information on the other aspects of this notice and is reopening for 180 days, until February 28, 1990, the period for interested persons to submit comments regarding the other issues on lead in ceramicware described in the notice.

Interested persons may, on or before November 30, 1989, submit to the Dockets Management Branch (address above) written comments regarding the proposed limits for lead in food-service pitchers excluding creamers and the proposed requirements for decorative ceramicware, and by February 28, 1990, comments on all other issues of lead in ceramicware. 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: August 28, 1989.

Ronald G. Chesemore,

Acting Associate Commissioner for Regulatory Affairs.

[FR Doc. 89-20634 Filed 8-31-89; 8:45 am]

BILLING CODE 4160-01-M

DEPARTMENT OF THE TREASURY

Bureau of Alcohol, Tobacco and Firearms

27 CFR Part 55

[Notice No. 688]

Commerce in Explosives

AGENCY: Bureau of Alcohol, Tobacco and Firearms (ATF), Department of the Treasury.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Bureau of Alcohol, Tobacco and Firearms (ATF) is proposing to amend 27 CFR 55.211 to require that the placards required by the Department of Transportation during transportation of blasting agents be in place on all facilities used to store blasting agents.

DATE: Written comments must be received by October 31, 1989.

ADDRESSES: Send written comments to: Chief, Firearms and Explosives Operations Branch, Bureau of Alcohol, Tobacco and Firearms, P.O. Box 189, Washington, DC 20044-0189, ATTN: Notice No. 688.

FOR FURTHER INFORMATION CONTACT: Daniel E. Crowley, ATF Specialist, Firearms and Explosives Operations Branch, Bureau of Alcohol, Tobacco and Firearms, (202) 789-3029. .

SUPPLEMENTARY INFORMATION: The Bureau of Alcohol, Tobacco and Firearms (ATF) is concerned that emergency response personnel be made aware of the contents of the vehicles and other facilities used to store blasting agents. While blasting agents are among the least sensitive explosives in common use, they, like all explosives, will sometimes explode when involved in a fire. Displaying the Department of Transportation (DOT) placards, which are required during over the road transportation, will identify the contents of these vehicles and other facilities and direct the emergency responders to the proper guide in the DOT "Emergency Response Guidebook". The explosives industry safety position on signs in areas where explosives are stored is that any sign be located so that a bullet passing through the sign will not strike a magazine. The Bureau supports this position where the magazines to be protected contain bullet sensitive explosive materials. Having the placards displayed will not increase the hazard to the general public from this stored explosive material since blasting agents are not sensitive to bullet impact. Thus, a bullet fired by chance at the placard and striking the contents of the magazine will not initiate an explosion of the blasting agent contents. Rather, the public and response team members will be better protected by the DOT guidebook recommended restriction of access and required evacuation of the fire scene area where blasting agents are involved in a fire.

Based on the above, ATF is proposing to amend the regulations at 27 CFR 55.211 to require that the DOT placards be displayed on magazines storing blasting agents.

Executive Order 12291

In compliance with Executive Order 12291, 46 FR 13193 (1981), ATF has determiined that this final rule is not a "major rule" since it will not result in:

(a) An annual effect on the economy of $100 million or more;

(b) A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or

(c) Significant adverse effects 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

The provisions of the Regulatory Flexibility Act relating to an initial and final regulatory flexibility analysis (5 U.S.C. 603, 604) are not applicable to this proposal, because the notice of proposed rulemaking, if promulgated as a final rule, will not have a significiant economic impact on a substantial number of small entities. The proposal will not impose, or otherwise cause, a

significant increase in reporting, recordkeeping, or other compliance burdens on a substantial number of small entities. The proposal is not expected to have significant secondary or incidental effects on a substantial number of small entities.

Accordingly, it is hereby certified under the provisions of section 3 of the Regulatory Flexibility Act (5 U.S.C. 605(b)) that this notice of proposed rulemaking, if promulgated as a final rule, will not have a significant impact on a substantial number of small entities.

Paperwork Reduction Act

The provisions of the Paperwork Reduction Act of 1980, Pub. L. 96–511, 44 U.S.C. Chapter 35, and its implementing regulations, 5 CFR part 1320, do not apply to this notice because no requirement to collect information is proposed.

Public Participation

ATF requests comments from all interested persons. Comments received on or before the closing date wil be carefully considered. Comments received after that date will be given the same consideration if it is practical to do so, but assurance of consideration cannot be given except as to comments received on or before the closing date.

ATF will not recognize any material as confidential. Comments may be disclosed to the public. Any material which the commenter considers to be confidential or inappropriate for disclosure should not be included in the comment. The name of the person submitting the comment is not exempt from disclosure.

Disclosure

Copies of this notice and the written comments will be available for public inspection during normal business hours at: ATF Reading Room, Disclosure Branch, Room 4412, Ariel Rios Federal Building, 1200 Pennsylvania Avenue, NW, Washington, DC.

Drafting Information

The principal author of this notice of proposed rulemaking is Daniel E. Crowley, ATF Specialist, Firearms and Explosives Operations Branch, Bureau of Alcohol, Tobacco and Firearms.

List of Subjects in 27 CFR Part 55

Administrative practice and procedure, Authority delegation, Customs duties and inspection, Explosives, Hazardous materials, Imports, Penalties, Reporting and recordkeeping requirements, Safety, Security measures, Seizures and forefeitures, Transportation, and Warehouses.

Authority and Issuance

PART 55—COMMERCE IN EXPLOSIVES

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

Authority: 18 U.S.C. 847.

Par. 2 Section 55.211 is amended by adding a new paragraph (a)(5) to read as follows:

* * * * *

§ 55.211 Construction of type 5 magazines.

(a) * * *

(5) *Placards.* The placards required by Department of Transportation regulation at 49 CFR Part 172, Chapter F for the transportation of blasting agents shall be displayed on all magazines.

* * * * *

Signed: August 1, 1989.

Stephen E. Higgins,

Director.

Approved: August 14, 1989.

John P. Simpson,

Acting Assistant Secretary (Enforcement).

[FR Doc. 89–20578 Filed 8–31–89; 8:45 am]

BILLING CODE 4810-31-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[PP 9E3708/P489; FRL 3637–7]

Pesticide Tolerance for Metolachlor

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This document proposes that a tolerance be established for the combined residues (free and bound) of the herbicide metolacholor and its metabolites in or on the raw agricultural commodity Cubanelle peppers. The proposed regulation to establish a maximum permissible level for residues of the herbicide in or on the commodity was requested in a petition submitted by the Interregional Research Project No. 4 (IR–4).

DATE: Comments, identified by the document control number [PP 9E3708/P489], must be received on or before October 2, 1989.

ADDRESS: By mail, submit written comments to: Public Information Branch, Field Operations Division (H7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington DC 20460.

In person, bring comments to: Rm. 246, CM#2, 1921 Jefferson Davis Highway, Arlington, VA 22202.

Information submitted as a comment concerning this document may be claimed confidential by marking any part or all of that information as "Confidential Business Information" (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2. A copy of the comment that does not contain CBI must be submitted for inclusion in the public record. Information not marked confidential may be disclosed publicly by EPA without prior notice. All written comments will be available for public inspection in Rm. 246 at the address given above, from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: By mail: Hoyt Jamerson, Emergency Response and Minor Use Section (H–7505C), Registration Division, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

Office location and telephone number: Rm. 716C CM #2, 1921 Jefferson Davis Highway, Arlington, VA 22202, (703)–557–2310

SUPPLEMENTARY INFORMATION: The Interregional Research Project No. 4 (IR–4), New Jersey Agricultural Experiement Station, P.O. Box 231, Rutgers University, New Brunswick, NJ 08903, has submitted pesticide petition (PP) 9E3708 to EPA on behalf of Dr. Robert H. Kupelian, National Director, IR–4 Project, and the Agricultural Experiment Station of Puerto Rico.

The petition requested that the Administrator, pursuant to section 408(e) of the Federal Food, Drug, and Cosmetic Act, propose the establishment of a tolerance for combined residues (free and bound) of the herbicide metolachlor (2-chloro-*N*-(2-ethyly-6-methylphenyl)-*N*-(2-methoxy-1-methylethyl)acteamide) and its metabolites, determined as the derivatives, 2-[(2-ethyl-6-methylphenyl)amino]-1-propanol and 4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone, each expressed as the recent compound, in or on the raw agricultural commodity Cubanelle peppers at 0.1 part per million (ppm).

The petitioner proposed that use on this commodity be limited to Puerto Rico based on the geograhical representation of the residue data submitted. Additional residue data will be required to expand the area of usage. Persons

seeking geographically broader registration should contact the Agency's Registration Division at the address provided above.

The data submitted in the petition and all other relevant material have been evaluated. The pesticide is considered useful for the purpose for which the tolerance is sought. The data considered in support of the tolerance include:

1. A 90-day dog feeding study with a no-observed-effect level (NOEL) of 500 ppm (12.5 milligrams (mg)/kilogram (kg)).

2. A 6-month dog feeding study with a NOEL of 100 ppm (2.5 mg/kg).

3. A rat teratology study with no maternal, teratogenic, or fetotoxic effects at all levels tested (0, 60, 180, and 360 mg/kg/day).

4. A rabbit teratology study with a NOEL for maternal effects at 120 mg/kg and no teratogenic of fetotoxic effects at all levels tested (0, 36, 120, 360 mg/kg/day).

5. A 2-year oncogenicity study in mice with no observed oncogenic potential under the conditions of the study at 30, 1,000 and 3,000 ppm (highest dose level equivalent to 428 mg/kg); and a repeated mouse oncognenicity study with no observed oncognic potential under the conditions of the study and a systemic NOEL of 1,000 ppm at the same dose levels as the original study.

6. A two-generation rat reproduction study with a reproductive NOEL of 300 ppm (15 mg/kg) and a lowest effect level (LEL) of 1,000 ppm (50 mg/kg).

7. Mutagencity studies including: A mouse dominant-lethal study, negative for mutagenic effects; a mouse lymphoma mutation assay, not a mutagen in both presence and absence of metabolic activator; two DMA damage/repair assays (in fibroblasts and in rat hepatocytes), both negative; an Ames assay, negative for mutagenic effects; and a Chinese hamster micronucleus assay with no evidence of mutagenicity at dosage levels tested (0, 1, 250, 2,500 and 5,000 mg/kg).

8. A 2-year chronic feeding/oncogencity study (IBT validated) in the rat conducted at dietary doses of 0, 30, 300 and 3,000 ppm with a statistically significant increase in primary liver neoplasms in females at the high dose (3,000 ppm).

9. A repeated 2-year chronic feeding/oncogenicity study in the rat conducted at the same dietary doses as the original study with a systemic NOEL of 300 ppm (15 mg/kg), a systemic LEL of 3,000 ppm (testicular atrophy) and a statistically significant increased incidence of neoplastic liver nodules and proliferative hepatic lesions in females in the high-dose group of 3,000 ppm.

The Agency has concluded that the available data constitute limited evidence for carinogenicity of metolachlor. Metolachlor has been tentatively classified as a Category C carcinogen (limited evidence of carinogencity in animals) based on the following considerations:

1. The oncogenic responses observed in rats were confined to the high-dose females at one site (liver).

2. The proliferative liver lesions observed in rats were primarily benign (neoplastic nodules in 6 of 60 animals) rather than hepatocellular carcinomas (1 of 60 animals). There was no apparent difference in the time-to-occurrence of the lesions (almost all liver tumors were observed at terminal sacrifice).

3. Metolachlor was not oncogenic to mice under the conditions of the 2-year mouse oncogenicity studies.

4. An Ames mutagenicity assay and a dominant-lethal study were negative for mutagenic effects.

An ancogenic risk assessment for metalochlor has been completed by the Agency based on the available information. The potential oncogenic risk from dietary exposure resulting from existing uses of metalochlor is calculated at $2\times10-6$. The dietary risk assessment is based on a potency estimator (Q^*) of $2.1\times10-3$ (mg/kg/day)-1 and dietary exposure as calculated by the theoretical maximum residue contribution (TMRC) for established tolerances (0.001167 mg/kg/day).

Tolerances have previously been established for residues of metolachlor ranging from 0.02 ppm in meat, milk, poultry, and eggs to 30.0 ppm in peanut forage and hay. Tolerances have also been established for residues of metolachlor on both chili and tabasco peppers at 0.5 ppm. Based on the rat chronic feeding study with a NOEL of 300 ppm (15 mg/kg/day) for nononcogenic effects and using a 100-fold safety factor, the acceptable daily intake (ADI) is 0.15 mg/kg/day. The theoretical maximal residue contribution (TMRC) for existing tolerances is 0.001167 mg/kg/day. The proposed use will contribute an additional 0.000001 mg/kg/day (0.09 percent increase). Published tolerances utilize 0.78 percent of the ADI. The proposed use of metolachlor on Cubanelle peppers poses a negligible, incremental increase since tolerances are already established on chili and tabasco peppers. The Agency concludes that the amount of the pesticide added to the diet from the proposed use will not significantly increase dietary exposure. Thus the tolerance established by the proposed rule is considered to pose a negligible incremental risk.

The nature of the residues is adequately understood and an adequate analytical method, gas-liquid chromatography with an electrolytic detector specific for nitrogen, is available for enforcement purposes. Analytical enforcement methods are currently available in the *Pesticide Analytical Manual* (PAM), Volume II. There are currently no actions pending against the continued registration of this chemical.

Based on the above information considered by the Agency and the fact that Cubanelle peppers are not considered an animal feed commodity, the tolerance established by amending 40 CFR 180.368 would protect the public health. Therefore, it is proposed that the tolerance be established as set forth below.

Any person who has registered or submitted an application for registration of a pesticide, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended, which contains any of the ingredients listed herein, may request within 30 days after publication of this document in the **Federal Register** that this rulemaking proposal be referred to an Advisory Committee in accordance with section 408(e) of the Federal Food, Drug, and Cosmetic Act.

Interested persons are invited to submit written comments on the proposed regulation. Comments must bear a notation indicating the document control number, [PP 9E3708/P489]. All written comments filed in response to this petition will be available in the Information Services Section, at the address given above from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays.

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

Pursuant to the requirements of the Regulatory Flexibility Act (Pub. L. 96-354, 94 Stat. 1164, 5 U.S.C. 601-612), the Administrator has determined that regulations establishing new tolerances or raising tolerance levels or establishing exemptions from tolerance requirements do not have a significant economic impact on a substantial number of small entities. A certification statement to this effect was published in the **Federal Register** of May 4, 1981 (46 FR 24950).

List of Subjects in 40 CFR Part 180

Administrative practice and procedure, Agricultural commodities,

Pesticides and pests, Reporting and recordkeeping requirements.

Dated: August 22, 1989.

Juanita Wills,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, it is proposed that 40 CFR part 180 be amended as follows:

1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

2. In § 180.368, by revising the introductory texts of paragraphs (a), (b), and (c) to specify the regulated combined residue as "free and bound" and by amending the table in paragraph (c) by adding and alphabetically inserting the raw agricultural commodity Cubanelle peppers, to read as follows:

§ 180.368 Metolachlor; tolerances for residues.

(a) Tolerances are established for the combined residues (free and bound) of the herbicide metolachlor (2-chloro-*N*-(2-ethyl-6-methylphenyl)-*N*-(2-Methoxy-1-methylethyl)acetamide) and its metabolites, determined as the derivatives, 2-[(2-ethyl-6-methylphenyl)amino]-1-propanol and 4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone, each expressed as the parent compound, in or on the raw agricultural commodities.

* * * * *

(b) Tolerances are established for indirect or inadvertent combined residues (free and bound) of the herbicide metolachlor (2-chloro-*N*-(2-ethyl-6-methylphenyl)-*N*-(2-methoxy-1-methylethyl)-acetamide) and its metabolites, determined as the derivatives, 2-[(2-ethyl-6-methylphenyl)amino]-1-propanol and 4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone, each expressed as the parent compound, in or on the following raw agricultural commodities when present therein as a result of the application of metolachlor to growing crops listed in paragraph (a) of this section to read as follows:

* * * * *

(c) Tolerances with regional registration as defined in § 180.1(n) are established for the combined residues (free and bound) of the herbicide metolachlor (2-chloro-*N*-(2-ethyl-6-methylphenyl)-*N*-(2-methoxy-1-methylethyl)acetamide) and its metabolites, determined as the derivatives, 2-[(2-ethyl-6-methylphenyl)amino]-1-propanol and 4-(2-ethyl-6-methylphenyl)-2-hydroxy-5-methyl-3-morpholinone, each expressed as the parent compound, in or on the following raw agricultural commodities:

Commodities	Parts per million
* * * * *	
Peppers, Cubanelle	0.1
* * * * *	

[FR Doc. 89-20579 Filed 8-31-89; 8:45 am]

BILLING CODE 6560-50-M

40 CFR Part 180

[PP 4E3048/P490; FRL 3637-8]

Pesticide Tolerance for Oxamyl

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This document proposes that a tolerance be established for residues of the insecticide/nematicide oxamyl in or on the raw agricultural commodity non-bell peppers and that the oxamyl tolerance expression be modified to include the oxime metabolite. The proposed regulation to establish a maximum permissible level for residues of the pesticide in or on the commodity was requested in a petition submitted by the Interregional Research Project No. 4 (IR-4).

DATE: Comments, identified by the document control number [PP 4E3048/P490], must be received on or before October 2, 1989.

ADDRESS: By mail, submit written comments to: Public Information Branch, Field Operations Division (H7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

In person, bring comments to: Rm. 246, CM #2, 1921 Jefferson Davis Highway, Arlington, VA 22202.

Information submitted as a comment concerning this document may be claimed confidential by marking any part or all of that information as "Confidential Business Information" (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. A copy of the comment that does not contain CBI must be submitted for inclusion in the public record. Information not marked confidential may be disclosed publicly by EPA without prior notice. All written comments will be available for public inspection in Rm. 246 at the address given above, from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: By mail: Hoyt Jamerson, Emergency Response and Minor Use Section (H-7505C), Registration Division, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

Office location and telephone number: Rm. 716C, CM #2, 1921 Jefferson Davis Highway, Arlington, VA 22202, (703) 557-2310.

SUPPLEMENTARY INFORMATION:

The Interregional Research Project No. 4 (IR-4), New Jersey Agricultural Experiment Station, P.O. Box 231, Rutgers University, New Brunswick, NJ 08903, has submitted pesticide petition (PP) 4E3048 to EPA on behalf of Dr. Robert H. Kupelian, National Director, IR-4 Project, and the Agricultural Experiment Stations of Arizona, Georgia, Louisiana, North Carolina, and Puerto Rico.

This petition requested that the Administrator, pursuant to section 408(e) of the Federal Food, Drug, and Cosmetic Act, proposed the establishment of a tolerance for residues of the insecticide/nematicide oxamyl (methyl *N'*, *N'*-dimethyl-*N*-[(methyl-carbamoyl)oxy]-1-thiooxamimidate) in or on the raw agricultural commodity peppers at 3.0 parts per million (ppm). The petition was later revised to propose a residue level of 5.0 ppm in or on non-bell peppers. Tolerances are currently established at 3.0 ppm in or on bell peppers.

The Agency has determined that the tolerance expression for oxamyl in 40 CFR 180.303 should reflect the sum of the residues of the insecticide oxamyl (methyl *N'*,*N'*-dimethyl-*N*-[(methyl-carbamoyl]oxy]-1-thiooxamimidate and its oxime metabolite *N'*,*N'*-dimethyl-*N*-hydroxy-1-thiooxamimidate calculated as oxamyl.

The data submitted in the petition and other relevant material have been evaluated. The pesticide is considered useful for the purpose for which the tolerance is sought. The toxicological data considered in support of the proposed tolerance include:

1. A 2-year rat feeding/oncogencity study with a systemic no-observed-effect level (NOEL) of 2.5 milligrams (mg)/kilogram (kg) or 50 ppm and no evidence of oncogenicity at 150 ppm (highest dose tested). A repeat rat study has been requested since the available study does not meet guidline requirements.

2. A 2-year mouse feeding/oncogenicity study with a systemic NOEL of 25 ppm and no evidence of oncogenicity at all levels tested (0, 25, 50, and 75 ppm).

3. A rabbit teratology study with a NOEL for developmental toxicity of 4 mg/kg/day or greater.

4. Mutagenicity studies including: Ames assay, chromosomal aberration, HGPRT, and DNA repair were all negative.

Toxicological data for oxamyl which are lacking but considered desirable include a chronic feeding/oncogenicity study in rats, a chronic feeding study in dogs, a three-generation reproduction study, a rat teratology, and a general metabolism study.

The preliminary limiting dose (PLD), based on the 2-year rat feeding study NOEL of 50 ppm (2.5 mg/kg/day) and using a 100-fold safety factor, is calculated to be 0.025 mg/kg of body weight (bw)/day. A PLD is set when the available data are insufficient to establish an acceptable daily intake (ADI) or a provisional acceptable daily intake (PADI). A PLD provides an exposure level of relatively low concern and will be replaced with an ADI once an acceptable chronic feeding study is available.

The theoretical maximum residue contribution (TMRC) from existing tolerances for a 1.5-kg daily diet is calculated to be 0.013229 mg/kg/day. The current action will result in a negligible increase in the TMRC of 0.000052 mg/kg/day (0.4 percent). Published tolerances utilize 52.9 percent of the PLD; the current action will utilize an additional 0.2 percent of the PLD.

The nature of the residues is adequately understood, and an adequate analytical method, gas-liquid chromatography using a flame photometric detector, is available in the *Pesticide Analytical Manual*, Vol. II (PAM II), for enforcement purposes. There are currently no actions pending against the continued registration of this chemical.

Based on the above information considered by the Agency, the tolerance established by amending 40 CFR 180.303 would protect the public health. No secondary residues in meat, milk, poultry, or eggs are expected since peppers are not considered a livestock feed commodity. Therefore, it is proposed that the tolerance be established as set forth below.

Any person who has registered or submitted an application for registration of a pesticide, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended, which contains any of the ingredients listed herein, may request within 30 days after publication of this document in the **Federal Register** that this rulemaking proposal be referred to an Advisory Committee in accordance with section 408(e) of the Federal Food, Drug, and Cosmetic Act.

Interested persons are invited to submit written comments on the proposed regulation. Comments must bear a notation indicating the document control number, [PP 4E3048/P490]. All written comments filed in response to this petition will be available in the Public Information Branch, at the address given above from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays.

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12292.

Pursuant to the requirements of the Regulatory Flexibility Act (Pub. L. 96-354, 94 Stat. 1164, 5 U.S.C. 601-612), the Administrator has determined that regulations establishing new tolerances or raising tolerance levels or establishing exemptions from tolerance requirements do not have a significant economic impact on a substantial number of small entities. A certification statement to this effect was published in the **Federal Register** of May 4, 1981 (46 FR 24950).

List of Subjects in 40 CFR Part 180

Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Recording and recordkeeping requirements.

Dated: August 18, 1989.

Anne E. Lindsay,

Director, Registration Division, Office of Pesticide Programs.

Therefore, it is proposed that 40 CFR part 180 be amended as follows:

PART 180—[AMENDED]

1. The authority citation for Part 180 continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

2. In § 180.303, the introductory text is revised by modifying the tolerance expression to include the oxamyl metabolite, and the table is amended by adding and alphabetically inserting the raw agricultural commodity non-bell peppers, to read as follows:

§ 180.303 Oxamyl; tolerances for residues.

Tolerances are established for the sum of residues of the insecticide oxamyl (methyl *N',N'*-dimethyl-*N*-[(methylcarbamoyl)-oxy]-1-thiooxamimidate and its oxime metabolite *N',N'*-dimethyl-*N*-hydroxyl-thiooxamimidate) calculated as oxamyl in or on the following raw agricultural commodities:

Commodities	Parts per million
* * * * *	
Peppers, non-bell	5.0
* * * * *	

[FR Doc. 89-20581 Filed 8-31-89; 8:45 am]

BILLING CODE 6560-50-M

40 CFR Part 180

[OPP-300204; FRL-3637-9]

Pome Fruits Group; Expansion of Definition

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This document proposes that 40 CFR 180.34(f)(9)(xi) be amended to include mayhaws in the subject pome fruits group. This proposed amendment, which will expand and redefine the definition of pome fruits group, was submitted by the Interregional Research Project No. 4 (IR-4).

DATES: Comments, identified by the document control number [OPP-300204], must be received on or before October 2, 1989.

ADDRESS: By mail, submit written comments to: Public Information Branch, Field Operations Division (H-7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

In person, bring comments to: Rm. 246, CM#2, 1921 Jefferson Davis Highway, Arlington, VA 22202.

Information submitted as a comment concerning this document may be claimed confidential by marking any part or all of that information as "Confidential Business Information" (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2. A copy of the comment that does not contain CBI must be submitted for inclusion in the public record. Information not marked confidential may be disclosed publicly by EPA without prior notice. All written comments will be available for public inspection in Rm. 246 at the address given above, from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: By mail: Hoyt L. Jamerson, Emergency Response and Minor Use Section (H7505C), Registration Division, Environmental Protection Agency, 401 M ST., SW., Washington, DC 20460.

Office location and telephone number: Rm. 716H, CM#2, 1921 Jefferson Davis Highway, Arlington, VA 22202, (703)-557-2310.

SUPPLEMENTARY INFORMATION: Dr. Jerry J. Baron, Associate Coordinator, Interregional Research Project No. 4 (IR-4), New Jersey Agriculture Experiment Station, P.O. Box 231, Rutgers University, New Brunswick, NJ 08903, has submitted this request to EPA on behalf of the IR-4 Project.

IR-4 requested that the Administrator, pursuant to section 408(e) of the Federal Food, Drug, and Cosmetic Act, propose that 40 CFR 180.34(f)(9)(xi) be amended by adding *Crataegus aestivalis,* and *C. opaca* (mayhaws) to the subject "pome fruits group," thereby expanding its definition. It has further been recommended by the Agency that *Crataegus rufula* (mayhaw) also be included in this grouping. Therefore, the entire proposal is that 40 CFR 180.34(f)(9)(xi) be amended by adding and alphabetically inserting "mayhaws (*Crataegus aestivalis, C. opaca,* and *C. rufula*)" to the subject "pome fruits group."

This amendment is requested in order to clarify and update the relationship between the subject "pome fruits group" and the specific raw agricultural commodities defined therein.

The IR-4 supports the portion of the request concerning *Crataegus aestivalis* and *C. opaca* by pointing out that "pome fruits group" should be precisely defined to include mayhaws, (*C. aestivalis* and *C. opaca*). The Agency further concludes that the mayhaw species *C. rufula* should also be included in this definition, since this species, as well as *C. aestivalis* and *C. opaca* produce fruits of potential commercial importance.

Mayhaws (*Crataegus aestivalis, C. opaca,* and *C. rufula*), as well as the other members of the pome fruits group, belong to the botanical subfamily Maloideae of the family Rosaceae. In addition, they have characteristics similar to the subject pome fruits group. Mayhaw is a small tree with ornamental characteristics which is planted commercially, in low wet acidic soils from North Carolina to Florida and west to Texas. The plant produces small apple-like fruits (8 to 19 millimeters in diameter) that are used for the production of jellies, marmalades, butter, preserves, and other processed commodities as well as feed for the wildlife.

Mayhaw is susceptible to many insects and diseases which affect other members of the pome fruits group, including plum curculio, aphids, flat-headed apple borer, white flies, weevils, quince rust, and fire blight.

The Agency agrees that these raw agricultural commodities are botanically and culturally similar and should be included in the pome fruits crop group for pesticide tolerance purposes. This revision will expand the tolerances and exemptions established for residues of pesticide chemicals in or on the subject "pome fruits group" to include the specific raw agricultural commodity mayhaws. Based on the information considered by the Agency, it is concluded that the regulation established by amending 40 CFR 180.34(f)(9)(xi) would protect the public health. Therefore, it is proposed that 40 CFR 180.34(f)(9)(xi) be amended as set forth below.

Interested persons are invited to submit written comments on the proposed amendment. Comments must bear a notation indicating the document control number, [OPP-300204]. All written comments filed in response to this petition will be available in the Public Information Branch, at the address given above from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays.

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

Pursuant to the requirements of the Regulatory Flexibility Act (Pub. L. 96-354, 94 Stat. 1164, 5 U.S.C. 601-612), the Administrator has determined that regulations establishing new tolerances or raising tolerance levels or establishing exemptions from tolerance requirements do not have a significant economic impact on a substantial number of small entities. A certification statement to this effect was published in the Federal Register of May 4, 1981 (46 FR 24950).

List of Subjects in 40 CFR Part 180

Administrative practice and procedure, Agricultural Commodities, Pesticides and pests, Recording and recordkeeping requirements.

Dated: August 18, 1989.

Anne E. Lindsay,

Director, Registration Division, Office of Pesticide Programs.

Therefore, it is proposed that 40 CFR part 180 be amended as follows:

PART 180—[AMENDED]

1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

§ 180.34 [Amended]

2. Section 180.34 *Tests on the amount of residue remaining* is amended in paragraph (f)(9)(xi) by adding and alphabetically inserting in the entry "pome fruits group" the raw agricultural commodity "mayhaws (*Crataegus aestivalis, C. opaca,* and *C. rufula*);".

[FR Doc. 89-20582 Filed 8-31-89; 8:45 am]

BILLING CODE 6560-50-M

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

45 CFR Part 1180

Regulations Under Section 504 of the Rehabilitation Act of 1973, Nondiscrimination on Basis of Handicap in Federally Assisted Programs and Activities

AGENCY: Institute of Museum Services, NFAH.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Institute of Museum Services issues regulations under section 504 of the Rehabilitation Act of 1973 (prohibiting discrimination on the basis of handicap in Federally assisted programs of IMS).

DATE: Comments must be received on or before October 30, 1989.

ADDRESSES: Comments should be addressed to Mamie Bittner, Public Information Officer, Institute of Museum Services, Room 510, 1100 Pennsylvania Ave. NW., Washington, DC 20506 (786-0536). Comments will be available for public inspection at the above address from 9:00 a.m. to 5:00 p.m. Monday through Friday except legal holidays.

FOR FURTHER INFORMATION CONTACT: Mamie Bittner, Public Information Officer, Institute of Museum Services, Room 510, 1100 Pennsylvania Ave., NW., Washington, DC 20506, (202) 786-0536 (Voice) or (202) 786-9136 (TDD). These are not toll-free numbers.

SUPPLEMENTARY INFORMATION:

1. General Background.

The Museum Services Act ("the Act"), which is Title II of the Arts, Humanities and Cultural Affairs Act of 1976, was enacted on October 8, 1976 and amended on December 4, 1980.

The purpose of the Act is stated in section 202, 20 U.S.C. 961, as follows:

> It is the purpose of [the Museum Services Act] to encourage and assist museums in their educational role in conjunction with formal systems of elementary, secondary, post-secondary education and with programs of nonformal education for all age groups: to assist museums in modernizing their methods

and facilities so that they may be better able to conserve our cultural, historic, and scientific heritage: and to ease the financial burden borne by museums as a result of their increasing use by the public.

The Act establishes an Institute of Museum Services (IMS) consisting of a National Museum Services Board (Board) and a Director. IMS is an independent agency placed in the National Foundation on the Arts and Humanities (National Foundation). Public Law 97–100, December 23, 1981; Public Law 97–394, December 30, 1982.

The act lists a number of illustrative activities for which grants may be made, including assisting museums to meet their administrative costs for preserving and maintaining their collections, exhibiting them to the public, and providing educational programs to the public. During fiscal year 1987 IMS provides four types of grant assistance to museums: (1) General operating support; (2) conservation assistance; (3) museum assessment assistance; and (4) assistance to professional museum organizations.

2. Need for the Regulations.

Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794, provides in pertinent part:

> No otherwise qualified individuals with handicaps in the United States, as defined in section 706(7) of [Title 29], shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. * * *

Prior regulations of IMS have specified the applicability of section 504 to programs of assistance administered by IMS. *Compare* 43 CFR 1180.44, F.R. 27733 (June 17, 1983) with former 45 CFR 64.17, 45 FR 53419 (Aug. 11, 1980), *See also* 45 FR 53415 (Aug. 11, 1980). Thus, formulation by the Board of rules regarding the applicability of section 504 does not establish a new statutory requirement for IMS recipients. Prior to the transfer of IMS to the National Foundation, regulations of the Education Department (of which IMS was then a part) governed the operation of section 504 as it related to programs of IMS. With the transfer of IMS to the National Foundation it is necessary to establish regulations governing the administration of section 504 as it pertains to these programs in the context of the status of IMS as an agency within the National Foundation.

In 1986 IMS issued regulations under section 504 relating to the enforcement of nondiscrimination on the basis of handicap in programs or activities conducted by the Institute itself. 45 CFR part 1181. These regulations implement section 119 of the Rehabilitation Comprehensive Services and Developmental Disabilities Amendments of 1978 and apply to all programs or activities conducted by the agency. 45 CFR 1181.102. It is now appropriate for IMS to issue revised regulations pertaining to nondiscrimination on the basis of handicap in federally assisted programs carried out by museums or other recipients under the Museum Services Act through grants or other financial assistance provided by IMS.

3. Description.

A purpose for the transfer of IMS to the National Foundation was to improve coordination of the policies of IMS with those of other agencies in the National Foundation. The Board has determined that, in formulating regulations under section 504, it would be consistent with this purpose for IMS to look to analogous rules adopted by the National Endowment for the Humanities (NEH), which is also an agency within the National Foundation. A number of reasons support this determination.

(1) By inter-agency agreement, IMS looks to NEH for administrative services with respect to section 504 matters. Making the NEH regulations applicable to IMS programs will facilitate a more efficient administration of section 504 to meet the needs of handicapped visitors to museums served by IMS.

(2) The Board desires to minimize the degree to which museums assisted both by IMS and by the Endowments, as well as members of the affected target population, must look to different sets of regulations to govern the same cross-cutting issue.

(3) The NEH regulations have been developed in light of particular questions which cultural institutions face in achieving compliance with section 504.

(4) Many museums which participate in programs administered by IMS are presumably familiar with the NEH regulations under section 504 and thus will more readily understand their responsibilities under its provisions.

For these reasons the Board determined to make applicable to IMS programs the NEH regulations under section 504 which are found in 45 CFR part 1170, 46 FR 55897 (Nov. 12, 1981).

Part 1170 was issued by NEH in 1981 and was based on the regulation for federally assisted programs issued by the Department of Health, Education, and Welfare (HEW) in 1977 (42 FR 22676) and later transferred to the Department of Health and Human Services (45 CFR part 84). Since 1977 a number of significant court opinions have been issued interpreting section 504 and the regulations implementing it. Because of this developing case law, regulations implementing section 504 in federally conducted programs issued in recent years by the IMS and more than 40 other agencies explicitly provide, unlike part 1170, that, in communicating with individuals with handicaps and ensuring that a program or activity is accessible, the Federal agency is not required to take any action that it can demonstrate would result in a fundamental alteration in the nature of the program or activity or in undue financial and administrative burdens (45 CFR 1181.150(a), 1181.160(d) (IMS); *see also, e.g.*, 28 CFR 39.150(a), 39.160(d) (Department of Justice); 45 CFR 1153.150(a), 1153.160(d) (NEA); 45 CFR 1175.150(a), 1175.160(d) (NEH). These provisions which were recently upheld in *Department of Justice Handicapped Employees Association* v. Meese, No. 84–5645 (E.D. Pa., Oct. 9, 1987), are based on the Supreme Court's ruling in *Southeastern Community College* v. *Davis*, 442 U.S. 397 (1979), that section 504 and the HEW regulation implementing it do not require actions that would have such effects. These provisions are also supported by *Alexander* v. *Choate*, 469 U.S. 287 (1985), in which the Court noted that section 504 and its implementing regulations at the time require "reasonable adjustments in the nature of the benefit offered * * * to assure meaningful access" (469 U.S. at 301 n. 21), but do not require " 'changes;' 'adjustments;' 'modifications' to existing programs that would be 'substantial' * * * or that would constitute 'fundamental alteration[s] in the nature of a program.' " *Id.* at n. 20 (citations omitted). Thus, although the NEH regulation that IMS proposes to adopt does not include the language found in the more recently issued regulations for federally conducted programs, it does not provide recipients, by virtue of judicial interpretation, the same fundamental alteration/undue burdens defenses. [*See e.g., Rhode Island Handicapped Action Committee* v. *Rhode Island Public Transit Authority*, 718 F. 2d 490 (1st Cir., 1983); *Dopico* v. *Goldschmidt*, 687 F. 2d 644 (2d. Cir. 1982);] *American Public Transit Association* v. *Lewis*, 655 F. 2d 1272 (D.C. Cir., 1981).

Numerous section 504 regulations for federally conducted programs, including the final rule issued by the Advisory Council on Historic Preservation also contain a clarification of the requirements of the statute as applied to historic preservation

programs (36 CFR 812.150 (a)(2), (b)(2) (Advisory Council on Historic Preservation)); *see also, e.g.*, 45 CFR 1153.150 (a)(2), (b)(2) (NEA); 45 CFR 2104.150 (a)(2), (b)(2) (Commission of Fine Arts)). In order to avoid a possible conflict between the congressional mandates to preserve historic properties on the one hand and to eliminate discrimination against individuals with handicaps on the other, these regulations provide that in historic preservation programs the agency is not required to take any action that would result in a substantial impairment of significant historic features of an historic property (*i.e.*, a property that is listed or eligible for listing in the National Register of Historic Places or designated as historic under a statute of the appropriate State or local government body). Nevertheless, because the primary benefit of an historic preservation program is uniquely the experience of the historic property itself, the regulations require the agency to give priority to methods of providing program accessibility that permit individuals with handicaps to have physical access to the historic property. When such access cannot be provided, however, the regulations permit the agency to adopt alternative methods for providing program accessibility. Such methods include using audio-visual materials to depict those portions of an historic property that cannot otherwise be made accessible, assigning persons to guide individuals with handicaps into or through portions of historic properties that cannot otherwise be made accessible, or adopting other innovative methods. IMS will follow this approach in applying 45 CFR Part 1170 to programs that have preservation of historic properties as a primary purpose.

4. Executive Order 12291.

These proposed regulations have been reviewed in accordance with Executive Order 12291. They are classified as nonmajor because they do not meet the criteria for major regulations established in the order.

5. Regulatory Flexibility Act Certification.

The Director certifies that these proposed regulations will not have a significant economic impact on a substantial number of small entities. To the extent that these proposed regulations affect States and State agencies, they will not have an impact on small entities because States and State agencies are not considered to be small entities under the Regulatory Flexibility Act.

These regulations will affect certain museums receiving Federal financial assistance under the Museum Services Act. However, they will not have a significant economic impact on the small entities affected because they do not impose excessive regulatory burdens or require unnecessary Federal supervision.

6. Invitation to Comment.

Interested persons are invited to submit comments and recommendations regarding these proposed regulations. Written comments and recommendations may be sent to the address given at the beginning of this preamble. All comments received on or before the 60th day after publication of this document will be considered in developing the final regulations.

All comments submitted in response to these proposed regulations will be available for public inspection, during and after the comment period, in Room 510, 1100 Pennsylvania Avenue NW., Washington, DC, between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday of each week except Federal holidays.

7. List of Subjects in 45 CFR Part 1180.

Blind; Buildings; Civil Rights; Employment; Equal employment opportunity; Equal educational opportunity; Handicapped; Historic places; Historic preservation; Museums; National boards.

Lois Burke Shepard,

Director Institute of Museum Services.

PART 1180—[AMENDED]

The Institute of Museum Services proposes to amend Subchapter E of Chapter XI of Title 45 of the Code of Federal Regulations as follows:

1. The authority citation for part 1180 is revised to read as follows:

Authority: 20 U.S.C. 961–968; Pub. L. 97–100, 95 Stat. 1414; Pub. L. 97–394, 96 Stat. 1994; 29 U.S.C. 794.

2. Part 1180 is amended by revising S 1180.44 to read as follows:

§ 1180.44 Federal statutes and regulations on nondiscrimination.

(a) Each grantee shall comply with the following statutes:

Subject	Statute
Discrimination on the basis of race, color or national origin	Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d through 2000d–4). 2000d–4).
Discrimination on the basis of sex	Title IX of the Education Amendments of 1972 (20 U.S.C. 1681–1683).
Discrimination on the basis of handicap	Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794).
Discrimination on the basis of age	The Age Discrimination Act (42 U.S.C. 8101) et seq.
(b)–(c) [reserved]	

(d) *Regulations under section 504 of the Rehabilitation Act of 1973.*

The Institute applies the regulations in 45 CFR part 1170, issued by the National Endowment for the Humanities and relating to nondiscrimination on the basis of handicap in federally assisted programs and activities, in determining the compliance of museums with section 504 of the Rehabilitation Act of 1973 as it applies to recipients of Federal financial assistance from the Institute. These regulations apply to each program or activity that receives such assistance. In applying these regulations, references to the "Endowment" or the "agency" shall be deemed to be references to the Institute and references to the "Chairman" shall be deemed to be references to the Director.

[FR Doc. 89–20465 Filed 8–31–89; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 611, 620, 672, and 675

[Docket No. 90899-9199]

RIN 0648-AC72

Foreign Fishing; General Provisions for Domestic Fisheries; Groundfish of the Gulf of Alaska, Groundfish Fishery of the Bering Sea and Aleutian Islands Area

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Proposed rule.

SUMMARY: The Secretary of Commerce (Secretary) proposes a rule that would implement Amendment 13 to the Fishery Management Plan (FMP) for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area (BSAI) and Amendment 18 to the FMP for Groundfish of the Gulf of Alaska (GOA). These regulations would implement the following measures specific to both Amendments 13 and 18: (1) Specific seasons would be deleted from the FMPs and all future seasons would be established by regulatory amendment; (2) a comprehensive data collection program would be implemented, which would consist of augmented recordkeeping and reporting requirements and a mandatory observer program; and (3) the Secretary's authority to separate or combine species within the target species category would be clarified. Proposed regulations specific to Amendment 13 would (1) close an area in the vicinity of the Walrus Islands to fishing for groundfish and (2) allocate fixed percentages of the allowable harvest amount of sablefish to trawl gear and fixed gear. Proposed regulations specific to Amendment 18 would: (1) Establish Shelikof Strait area as a management district; (2) Close areas around Kodiak Island to bottom trawl gear; and (3) Establish for one year interim Pacific halibut prohibited species catch limits for fixed gear and trawl gear. This action is necessary to promote management and conservation of groundfish and other fish resources. It is intended to further the goals and objectives contained in both fishery management plans that govern these fisheries.

DATE: Comments are invited until October 12, 1989.

ADDRESS: Comments may be sent to Steven Pennoyer, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 21668, Juneau, AK 99802. Copies of the environmental assessment/regulatory impact review/initial regulatory flexibility analysis (EA/RIR/IRFA) may be obtained from the same address. Comments on the environmental assessment are particularly requested.

FOR FURTHER INFORMATION CONTACT: Ronald J. Berg or Susan J. Salveson (Fishery Management Biologists, NMFS), 907-586-7230.

SUPPLEMENTARY INFORMATION:

Background

The domestic and foreign groundfish fisheries in the Exclusive Economic Zone (EEZ) of the GOA and BSAI areas are managed by the Secretary according to FMPs prepared by the North Pacific Fishery Management Council (Council) under the authority of the Magnuson Fishery Conservation and Management Act (Magnuson Act). The FMPs are implemented by regulations for the foreign fishery at 50 CFR Part 611 and for the U.S. fishery at 50 CFR Parts 672 and 675. General regulations that also pertain to the U.S. fishery are implemented at 50 CFR Part 620.

The Council annually solicits management proposals from the public and state and Federal agencies. The Council set a deadline of October 1, 1988 for receiving proposals for inclusion in Amendments 13 and 18. At its meeting on January 18-20, 1989, the Council reviewed the proposals that were received. It selected three measures that would amend both FMPs, two measures to specifically amend the GOA FMP and three measures to specifically amend the BSAI FMP for further consideration. The Council's GOA and BSAI Plan Teams prepared draft EA/RIR/IRFAs to discuss and analyze the need for the proposals under each FMP under guidance of the National Environmental Policy Act of 1969, Executive Order 12291, and NOAA policy. The Council reviewed these documents at its meeting on April 10-14, 1989 and decided to send the analyses to the interested public for review. These documents are dated May 3, 1989. A June 12, 1989 supplement to the EA/RIR/IRFA was prepared by the Council staff.

At its June 20-23, 1989, meeting, the Council considered the testimony and recommendations of its Advisory Panel (AP), Scientific and Statistical Committee (SSC), Plan Teams, fishing industry representatives and the general public on each amendment proposal and the EA/RIR/IRFA documents. It then approved the following measures for inclusion into Amendments 13 and 18 for review by the Secretary under § 304(b) of the Magnuson Act:

Measures specific to both Amendment 13 and 18:

(1) Specifications for fishing seasons would be deleted from the FMPs and all future season changes would be implemented by regulatory amendment.

(2) A comprehensive fishery data collection program would be implemented, which would consist of:

A. augmented recordkeeping and reporting requirements; and

B. a mandatory observer program.

(3) The Secretary's authority to separate or combine species within the target species category would be clarified.

Measures specific to Amendment 13:

(1) An area in the vicinity of the Walrus Islands would be closed to fishing for groundfish.

(2) Sablefish would be allocated to fixed gear and trawl gear.

Measures specific to Amendment 18:

(1) Shelikof Strait District would be established as a management district.

(2) Areas around Kodiak Island would be closed to trawling.

(3) Interim Pacific halibut prohibited species catch limits for fixed gear and trawl gear would be established for 1990.

A description of, and the reasons for, each measure are as follows:

1. Delete Specific Seasons From the FMPs

Currently, fishing season opening and closing dates are established in the FMPs. All seasons are specified in both FMPs to be the January 1-December 31 fishing year, except for the GOA hook-and-line season for sablefish, for which the season starting date is established by the FMP to be April 1. Since the FMPs establish the seasons, they can be changed only by amendments to the FMPs, a procedure that normally takes about a year to implement. As domestic fisheries have matured, the need to change seasons to meet fishery needs has necessitated a more timely procedure to implement fishing seasons.

Under this measure, specifications for fishing seasons would be deleted from the FMPs but would be retained in regulations implementing the FMPs. The purpose of this measure is to establish a mechanism, regulatory amendment, for timely changing of seasons. The Council recommends that future season changes be proposed and implemented by the Secretary in consultation with the Council. Since the Secretary must consider whether a regulatory amendment is consistent with the Magnuson Act and other applicable law, appropriate analyses would accompany future regulatory amendments. Regulatory amendments would be published in the **Federal Register** for public review and comment.

The Council proposes to remove specific references to seasons from the BSAI and GOA FMPs, and proposes any future changes in fishing seasons be implemented by regulatory amendments. Such future changes would be considered on a case-by-case basis and would be implemented only if they are consistent with the criteria specified in the FMP, the Magnuson Act, and other applicable law.

2. Comprehensive Data Collection Program

The comprehensive data gathering program considered below for the BSAI and GOA groundfish fisheries consists of two parts:

(A) Recordkeeping and reporting requirements; and

(B) A mandatory observer program.

The purpose of the comprehensive data collection program is to provide the Council and NMFS with adequate and reliable fishery data on which to (1) base inseason and inter-season management decisions; (2) efficiently carry out their resource management responsibilities; and (3) measure fishery performance against existing and proposed management measures. Historically, the NMFS' Foreign Fisheries Observer program has been the primary source for these data. Foreign groundfish operations have been curtailed in recent years with the rapid expansion of the domestic groundfish industry. As a result, fishery managers have lost access to much of the resource and fishery performance data that were formerly gathered from the foreign fishery.

Alaskan groundfish harvests by U.S. fishermen grew from 8,600 mt in 1979 to over 2.2 million mt in 1988. Domestic trawlers fishing in joint ventures with foreign processors were responsible for most of the initial growth in the U.S. groundfish industry. In 1988, however, catches from vessels involved in wholly domestic operations comprised over a third of the total groundfish harvest off Alaska. In 1989, domestic operations are expected to take about 80 percent of the groundfish harvest. The rapid expansion in the wholly domestic fishery coupled with the lack of a comprehensive domestic observer program and inconsistent, inadequate, or unenforceable reporting requirements has placed new demands on management and enforcement agencies, at a time of limited management resources. The growing contentiousness of fishery management issues, including resource allocation among competing domestic user groups, compels managers to take steps to regain some of the fishery information previously gathered from foreign fleets, and requires reliable catch, resource, and economic information when evaluating potential management measures.

The need for fishery managers to consider reliable biological, economic, and other fishery performance information is explicit in the management goals and objectives established by the Council, and are required by the Magnuson Act, Executive Order 12291, the Regulatory Flexibility Act, and other applicable law. These requirements mandate, for example, that concise biological and economic analyses be completed to assess all relevant effects of proposed changes in management measures. These requirements place specific burdens upon the Council and NMFS to consider the biological, economic, and social implications of, not only the preferred alternative, but of all reasonable options available to them. Attainment of this level of assessment is highly dependent upon the quality and timeliness of the biological and economic data available for analysis.

These data are not currently collected in sufficient detail, nor on an adequately consistent basis, to provide guidance to decision makers in the increasingly complex circumstances which prevail in the groundfish fisheries off Alaska. The cost of making decisions based on inadequate information is no longer borne by foreign fisheries. Rather, it is imposed on the domestic groundfish industry. Such costs can adversely affect the viability of the domestic groundfish industry in the very competitive world groundfish markets. The lack of adequate information also results in the fishery management decision making process being less objective, more political, and potentially less equitable. This can decrease the credibility of the fishery management process and result in an unnecessarily costly and less effective management system.

The Council, therefore, proposes a comprehensive fishery data collection program that augments recordkeeping and reporting requirements and mandates observer coverage. Fishery information would be compiled and maintained by NMFS in a fisheries information database that would be accessed by fishery managers and used (1) for inseason enforcement and catch verification; (2) to evaluate existing and proposed management measures; and (3) as a secondary index for stock assessment.

A description of the proposed measures for (A) augmented recordkeeping and reporting requirements and (B) the mandatory observer program follows:

(A) Recordkeeping and Reporting Requirements

Existing regulations do not allow adequate catch, effort, and economic data to be collected from the fishing industry. The changes in recordkeeping and reporting requirements discussed below are intended to reduce this problem with respect to information for which the industry is the best or only source. In general terms, this information includes the following: 1) Fishing effort, 2) retained groundfish catch, 3) discard amounts, 4) fish products, 5) employment, 6) costs, and 7) product value.

Changes in Recordkeeping Requirements

Each catcher/processor, mothership processor, and shoreside processor utilizing groundfish harvested off Alaska would be required to maintain a daily cumulative production log (DCPL).

Each vessel 5 net tons and larger that harvests groundfish off Alaska would be required to maintain a daily fishing log (DFL).

Each shoreside processor would be required to maintain a product transfer log similar to that currently required of at-sea processors.

Changes in Reporting Requirements

Each processor required to maintain a product transfer log would be required to submit to NMFS a weekly summary of their transfer log entries for each week in which transfers occurred.

The weekly catch report in round weight for each at-sea processor would be replaced with a weekly production report in product weight.

Each shoreside processor would also be required to submit a weekly production report in product weight.

Each processor and catcher vessel required to maintain a DCPL and/or DFL would be required to submit quarterly to NMFS a copy of their DCPL and/or DFL records.

Each processor (i.e., at-sea and shoreside) or its parent company would be required to submit annually a monthly product value report (MPVR) that would summarize sales in quantity and value by species and product form.

The NMFS will provide logbooks to the industry. Logbooks will be printed on 2-part carbonless paper so that vessel operators and plant owners can simply tear out copies of their daily logs when making their quarterly submissions to NMFS.

To lessen the cost to the industry of meeting the recordkeeping and reporting

requirements, logbooks have been designed so that each sector of the industry receives a logbook form tailored to meet its specific needs. For example, a logbook will be made available to catcher/processor vessels that: (1) May be used for meeting the requirements for both the daily cumulative production log and the daily fishing log; and (2) will provide the information required in the weekly production report.

The recordkeeping programs developed for the groundfish industry have also been designed to compliment reporting requirements and would consolidate, to the extent practicable, other recordkeeping requirements to lessen the paperwork burden on vessel and processor operators. For example, the proposed marine mammal logbook program contains recordkeeping requirements (54 FR 258321, June 19, 1989) mandated by recent amendments to the Marine Mammal Protection Act of 1972 (MMPA) that have been incorporated into the groundfish logbook program.

Most of the information specified in the recordkeeping requirements is currently maintained by the industry for internal business reasons. To minimize the recordkeeping costs associated with fishery management requirements, the logbooks are designed to provide a convenient form to enter information that serves both the business needs of those who maintain them and the reporting requirements being proposed.

Species product amounts recorded in the DCPL and product transfer log are expected to be accurate to the nearest 0.1 mt (220 lbs). Because enforcement personnel are mainly interested in preventing intentional gross under logging of valuable groundfish species, some enforcement discretion will be necessary when encountering minor discrepancies between reported and observed product weights.

Examples of the logbook forms and associated report forms are presented as an Appendix to this notice. These forms have been developed to collect the type of information needed by fishery managers to respond to the concerns and problems addressed above. In addition to this information, additional data on gear specifications, crew size, and vessel specifications and activity are discussed below. The Secretary is inviting comments from the industry and the public concerning the practicality and advisability of providing this data and may consider requiring the submission of this data depending on the comments received. The specifics of the proposed changes in the recordkeeping and reporting requirements are included in the following discussions of the individual logs and reports.

Daily Cumulative Production Log (DCPL)

Catcher/processors, mothership processors, and shoreside processors would be required to maintain a daily cumulative production log (DCPL). The log would include daily, weekly, and year to date production information. The logs would remain on the vessels or at the processing plants during the fishing year and for as long after the fishing year as species products recorded in the DCPL are retained. These logs would be made available to observers and enforcement officers. Copies of the DCPLs would be submitted to NMFS on a quarterly basis to allow for timely data entry and analyses.

The processors' DCPL records would be used by enforcement officers to assist in verifying information reported in the weekly production reports. It would also assist processors in preparing their weekly production reports.

Daily Fishing Log (DFL)

Each vessel 5 net tons or larger harvesting groundfish off Alaska would be required to maintain a daily fishing log (DFL). The DFL would include: 1) Vessel and gear specifications; 2) individual haul or set information; 3) daily information on discards; and 4) information on daily vessel activity.

Vessel and gear specifications would include such information as the reporting area where the vessel is conducting fishing activities, crew size, and type of gear used. For hook-and-line and pot gear, information would be collected on the average number of hooks or pots per skate, size of hooks used, and average length of skates. Specific trawl information would include size of net opening, codend mesh size, and average speed of tow.

The Secretary is considering additional reporting requirements, not specified in the proposed rule, concerning gear specifications. Additionally, the crew size information may be required to be further specified according to the number of the crew involved in fishing activities and the number involved in processing activities. Finally, additional vessel specifications such as engine power may be required. Comments are requested with respect to these additional reporting requirements.

The individual haul information would include the date, time, location, sea depth, trawl depth, duration of haul or soak time, number of units of gear fished for fixed gear vessels, i.e., those using hook-and-line and pot gear, and estimated haul weight of total catch. The discard information would be for groundfish and for prohibited species. The estimated daily discards of halibut, crab, and salmon would be reported in numbers and by species if possible. All other species discard estimates would be reported by weight (0.1 mt). Fishing vessels delivering to groundfish processors would be required to provide their discard estimates to the processors so that the processors can report these discards in their weekly production reports.

The fishing effort information would be used for inseason enforcement and for biological and economic evaluations of existing and proposed fishery management measures. The former would consist primarily of activities associated with verifying information reported in weekly production reports.

Discard data would be used to obtain information relating to total fishing mortality resulting from groundfish operations. Although a comprehensive observer program would provide groundfish and prohibited species discard information from a significant portion of the industry, all catcher vessels and processors would be required to record discard information. In addition to total mortality estimates, this information would be used to derive estimates of bias resulting from intentional or unintentional misreporting of data, or from collection of non-representative data.

The Secretary is considering additional requirements not specified in the proposed rule. The vessel operators may be required to record vessel time (to the nearest hour) spent on the following activities: (1) Searching for fish; (2) fishing; (3) time in transit to a fishing area; and (4) down time. This information could be used to evaluate fishing effort and associated costs in economic analyses of fishery performance. The Secretary requests comments on the practicality of these requirements relative to the increased burden imposed should they be implemented.

The logs would remain on the vessels until the end of the fishing year and would be made available to both at-sea and shoreside observers and to enforcement officers. Mothership processor vessels would be required to make the daily fishing log information for its catcher vessels available to an at-sea observer. At-sea and shoreside observers would collect the effort data and use other information in the logs to assist in meeting their data collection responsibilities. The discard information

maintained in the logs would assist those responsible for completing the weekly production reports which include estimates of discards.

Copies of the DFLs would be submitted to NMFS on a quarterly basis. As mentioned above, this information, along with that recorded in the DCPLs, would be maintained in a NMFS database that would be accessed to evaluate existing and proposed management measures.

Product Transfer Logs

Shoreside processors would be required to maintain a product transfer log similar to that currently required of at-sea processors. This log would be used to record all shipments or receipts of product by species and product type, the name of the company or person transporting the product, the date of shipment (or receipt), and the destination of the product.

This information is necessary to verify the accuracy of reported groundfish catches received by a processor. Verification of groundfish catches received by shoreside processors also requires that DCPLs and product transfer logs be made available for comparison to actual inventories.

Weekly Transfer Report

Each processor required to maintain a transfer log would be required to submit to NMFS copies of the transfer log entries for each week in which transfers occurred. Current regulations require only catcher/processors and mothership vessels to submit summary product transfer information. This information assists enforcement officers in verifying reported catch, and would be compared with on board transfer logs, DCPLs, and product inventory to verify the amount of retained product reported in the weekly production reports.

Weekly Production Report

The weekly catch report now required of catcher/processor and mothership vessels would be changed to a weekly product report, and a similar weekly product report would also be required of shoreside processors. It would summarize (1) total estimated catch weight or receipt; (2) weekly production by species and product form; and (3) estimated discards of prohibited species and other species.

For catcher/processor and mothership vessels, the principal change is that they would report product weight rather than round weight. This simplifies reporting, because product weights are maintained for business purposes. It also eliminates any inconsistencies that can occur when standard conversion factors by species and product form are not used to estimate round weight equivalents of product weight.

NMFS would prepare a list of standard product recovery rates prior to the beginning of a fishing year. A notice of availability of these rates would be published in the **Federal Register** and comments would be invited. Any changes to these rates made as a result of comments received would be submitted to the industry in a news release. Any changes in these rates during a fishing year would be accomplished by the same procedure. These rates may be adjusted based on observer data or industry input. This requirement will contribute to better enforcement and more accurate catch reporting by removing any incentive to vessel operators to manipulate product conversion rates in order to "stretch" quotas of valuable groundfish species.

Shoreside processors currently submit groundfish landings information on State of Alaska fish tickets. These processors would also submit weekly production reports for the following reasons: (1) Fish tickets do not collect discard information on prohibited species; (2) the landed groundfish product reported on fish tickets often differs from the product type placed in inventory by the processor, which is a situation that can frustrate attempts by enforcement personnel to verify reported landings with product inventory; and (3) fish tickets are not easily modified to reflect changes in Federal reporting requirements that are necessary to account for species by species quota management.

Species discard information is currently required on the weekly catch report. This information would continue to be required in the weekly production report for the same reason it is included in the proposed daily fishing log. That is, to account for total fishing mortality. Mothership processors and shoreside processors would be expected to collect and report at-sea discard information from the fishing vessels that deliver groundfish to them and also report their own discards of landed fish.

Monthly Product Value Report (MPVR)

Each catcher/processor, mothership processor, and shoreside processor or its parent company would complete a monthly product value report (MPVR) for any month during which groundfish harvested off Alaska were sold. The report would consist of quantity and product value data summarized by species and product form for all sales transactions for the calendar month. The report would be submitted to NMFS annually, at the conclusion of the fishing year. By providing monthly information on an annual basis, valuable data on seasonal price fluctuations would be obtained without placing domestic processors in a position of disclosing sensitive proprietary information during the fishing season.

Exvessel product value data are often reported on fish tickets for fishing vessels delivering to shoreside processors. Typically, an exvessel transaction does not occur when catcher/processor or mothership vessels off-load their product; and there are no exvessel prices and values to be reported on a fish ticket at the time it must be submitted. Therefore, an alternative mechanism is required to collect price and value data for this important and rapidly growing component of the groundfish fishery. To have comparable data from shoreside processors, extension of this requirement to all processors is necessary.

This information would be used in monitoring the economic performance of the groundfish fisheries and in conducting economic analyses of existing and proposed management measures. The requirements for such activities were discussed earlier.

The Council recommends that the above recordkeeping and reporting requirements be implemented so that adequate fishery information may be collected from the groundfish industry.

Other Changes in Reporting Requirements

In addition to the above changes in recordkeeping and reporting requirements that were adopted by the Council at its June 1989 meeting, the Secretary is proposing the following two changes to existing reporting requirements:

(1) Place the responsibility of submitting Alaska State fish tickets with groundfish buyers, including shoreside and floating processors, although the responsibility for the accuracy and completeness of the fish ticket would remain with the catcher vessel. This proposal recognizes the existing practice whereby buyers submit fish tickets on behalf of the fishermen and would make the Federal reporting requirement for fish ticket submission the same as State regulations (5 AAC 39.130. Reports Required of Processors, Buyers, and Fishermen.) Compliance with submission requirements is more practical to enforce if the party that collects the fish tickets is made responsible for timely submissions.

(2) Extend Federal reporting requirements to processors that receive

from fishing vessels that have been issued a Federal groundfish permit, groundfish harvested from State waters. Existing regulations do not require these processors to submit weekly catch reports or product transfer reports for groundfish harvested from State waters. Inseason monitoring and catch verification of groundfish receipts by these vessels relies only on State fish ticket information which is often less timely than weekly catch reports and does not allow for verification of catch receipts to the extent that logbooks and weekly production reports would. Excluding these processors from Federal reporting requirements undermines the intent of Amendment 17 to the Gulf FMP and Amendment 12 to the Bering Sea FMP (54 FR 18519, May 1, 1989) that extended Federal reporting requirements under §§ 672.5 (a) and 675.5 (a) to mothership processors that operate outside of the EEZ and process groundfish harvested from the EEZ. The proposal to extend Federal reporting requirements to all floating groundfish processors operating within the State waters recognizes the need of Federal managers to be able to account for total fishing mortality for inseason monitoring of quotas. In order to do this, Federal reporting requirements need to be extended to those mothership processors that take Federally managed groundfish from State waters.

In 1989, only 1 mothership processor has operated within the State waters, but most of the groundfish received by this vessel were reportedly harvested from the EEZ. Although the problem addressed by this proposal does not appear to be an issue at this time, it is desirable to implement the proposed extension of Federal recordkeeping and reporting requirements to close this potential loophole in Federal regulations. Mothership vessels operating within State waters during 1988 and 1989 were included in the analysis presented in the EA/RIR/IRFA prepared for Amendments 13 and 18 that examined the potential burden to the groundfish industry to comply with proposed recordkeeping and reporting requirements.

(B) Mandatory observer program.

Observers will be a uniformly trained group of scientists whose objectives are data gathering. They will be stationed aboard vessels and at shorebased processing plants to gather data according to a statistically-sound sampling plan of fishing and processing activities in the industry to provide data that cannot be accurately reported by fishermen or are too burdensome for them to collect during their normal operations. The observer program is intended to augment the industry recordkeeping and reporting system. Observers will perform multiple duties including: estimating haul weight, sampling for species composition, estimating product recovery rates, estimating discards and catch of prohibited species (PSCs), collecting biological data and specimens, and collecting data on the operation and characteristics of the vessel and fishing effort.

The need for observer coverage is directly related to the desired quality and reliability of the data collected from the fishing industry. Two principal reasons for observer coverage are:

(1) *To reduce the chance of bias in the data.*

Some fishery data, such as haul weight, amount of discards (e.g. undersized fish, undesired species, undesired quality), and amount of PSCs (e.g. Pacific halibut, king crab, and Tanner crabs), have a greater potential for bias than other data, such as landed catch. Bias can result from intentional or unintentional misreporting of data or collecting non-representative data. Deliberate under-reporting of PSCs to stay under a PSC cap and therefore prolong a fishery opening is an example of intentional misreporting of data. Underreporting or over-reporting of discards, because the importance of such data collection is secondary to catching and processing target species, is an example of unintentional misreporting of data. Nonrepresentative data may be gathered if a fishing crew aboard a vessel collects sound data on PSCs in one area (e.g. because catch is small and there is time to collect such data) but not in another (e.g. because catch is large and there is not time to collect data).

(2) *To relieve industry from the burden of collecting data.*

Collection of data not normally gathered by fishermen or processors might be an inordinate burden if fishermen and processors were required to collect such data. For example, samples used to provide age data on some species are not normally collected in the prosecution of a fishery. Even collecting data on amounts of discard and PSC divert fishermen and processors from their primary responsibilities. In addition, gathering certain kinds of data may require specialized training, which could be an added burden if such training were required of industry.

Examples of data which, for one or both of these reasons, are best collected by onboard or onshore observers include:

- Mortality rates for non-landed catch—e.g. PSC and discards.
- Species composition data—to determine species co-occurrence and interactions.
- Size/length and age composition data—to determine year class strength and as input data for age-structured cohort analyses models.
- Fish stomach samples—to determine predator-prey relationships.
- Marine mammal interactions.
- Biological specimens and tag placement or recovery—to provide information for selected objectives, such as migration.
- Processing gear and techniques.
- Product recovery rates.

To provide a comprehensive sampling of the industry's activities over a wide geographical area and time period, the observer deployment will be devised so as to achieve a "statistically reliable" sampling of the fleet's fishing and processing activities.

The Council, with wide industry support, recognizes the importance of at-sea and shore-side observers to obtain the above information. The Council, therefore, recommends that the Secretary, in consultation with the Council, implement a mandatory observer program, according to an Observer Plan that the Council will develop in coordination with the industry. The Secretary recognizes that at this time the scope of the mandatory observer program is not fully developed. Should the Secretary approve this amendment, additional details need to be worked out in relation to requirements for marine mammal observers that are being imposed in compliance with the amended Marine Mammal Protection Act, and coordinated with NMFS with respect to the training needs and deployment.

3. Clarification Of The Secretary's Authority.

Under this measure, current authority in the BSAI and GOA FMPs and implementing regulations would be clarified to indicate that the Council is able to recommend total allowable catches (TACs) for (1) additional target species within the "target species" category for purposes of managing smaller stock components, or (2) fewer target species within the "target species" category for purposes of managing larger stock components. This action is necessary, because both FMPs are vague with respect to the Council's existing authority. The Council would continue to use the framework procedure that is now in place for establishing the annual TACs. The need

to clarify the Council's authority on establishing TAC amounts within the target species category is as follows.

Four categories of species and species groups are now specified in the FMPs. They are: Target species, "other species", prohibited species, and non-specified species. For each of these categories, species and species groups are listed, as shown below.

Area	Target	"Other"	Prohibited	Non-specified
GOA & BSAI species.	Pollock Pacific cod. Sablefish Other rockfish.	Sculpins Sharks Skates Eulachon Smelts Octopus Capelin	Halibut Salmon Steelhead. Herring King crab. Tanner crab.	Species or groups of no economic value. Records not required
BSAI only	Arrowtooth flounder. Greenland turbot. Yellowfin sole. Rock sole. Atka mackerel. Pacific ocean perch. Squid. Other flatfish.			
GOA only.	Pelagic shelf rockfish. Thornyhead rockfish. Demersal shelf rockfish.	Flatfish	Atka mackerel. Squid	

Each January 1–December 31 fishing year, the Council recommends TACs and apportionments thereof among DAP, JVP, TALFF, and reserves for each of the above target species and the "other species" category. Subject to his approval, the Secretary implements the new TACs and apportionments. These actions are provided for by a procedure summarized below and set forth in the FMPs and implementing regulations, and are normally accomplished within a four-month (September–December) time frame.

Under this procedure, the Council recommends to the Secretary at its September meeting of each year preliminary specifications for TACs and apportionments thereof for each of the target species and the "other species" category. The Secretary publishes these recommendations in the **Federal Register** and invites public comments for 30 days. The Council, at its December meeting, reviews comments received and other available information and recommends to the Secretary initial specifications and apportionments thereof for the new fishing year Subject to Secretarial approval, these recommendations are then published in the **Federal Register** for purposes of managing the groundfish fisheries during the new fishing year.

Prior to 1988, the Council had split some of the target species groups into individual species and had established separate TACs for the individual species during the process of developing TACs for the upcoming fishing year. Reasons for establishing TACs for additional target species included fostering management of smaller components of the groundfish stocks to prevent overharvesting any one component. Examples of these actions in the BSAI included: (1) Splitting the "other flatfish" group into "other flatfish" and turbot; and (2) splitting the turbot group into arrowtooth flounder and Greenland turbot. Examples in the GOA included splitting "other rockfish" into pelagic shelf rockfish, slope rockfish, and demersal shelf rockfish. The Council took these actions in previous years after being advised by NOAA General Counsel that the Secretary is authorized under the FMPs to split species groups within the four discrete categories without amending the FMPs. NOAA General Counsel also advised, however, that moving species or species groups among the four categories, for example redesignating a target species as a prohibited species, would require an FMP amendment.

Nonetheless, the Council recommended that a TAC for rock sole be split from the "other flatfish" TAC as part of a 1988 amendment package to the BSAI FMP. The Secretary implemented this measure as Amendment 12 to the FMP. This process of using an FMP amendment to split a species from a target species group by FMP amendment is inconsistent with previous Council actions listed above, whereby the Council simply incorporated such changes during the development of initial TAC amounts. Furthermore, measures addressed under the amendment process take approximately one year to become effective, whereas the development and implementation of TAC amounts for an upcoming fishing year take about four months.

The Council recommends that the FMPs and regulations be amended to clarify the appropriate procedure. The Council proposes to amend the framework procedure contained in the FMPs and in the implementing regulations to clarify the procedure.

4. Walrus Islands Fishing Area Closure

Under this measure, portions of the Bering Sea subarea shoreward of twelve miles from islands named "the Twins" and "Round Island" and also Cape Peirce would be closed to fishing for groundfish from April 1 through September 30 of 1990 and 1991. The purpose of this measure is to restrict fishing activity in areas used as haul-out sites by walrus for a two-year period, during which effects of noise from fishing operations on walrus behavior can be better determined. In 1987 and 1988 the number of walrus hauled out on Round Island (Walrus Islands State Game Sanctuary) and at Cape Peirce (Togiak National Wildlife Refuge) declined by more than 50 percent, coincident with the initiation of fishing for yellowfin sole in the same area of northern Bristol Bay. State officials on Round Island reported frequent, loud noise on the island for the first time in 1987; these sounds emanated from yellowfin sole fishing vessels that were present. Various management actions near Round Island have been taken over the past several years to maintain or reduce levels of potential disturbance to walrus from other human related activities (e.g., from tourism and other fisheries such as salmon, herring, etc.).

Conclusive data establishing a direct cause and effect relationship between the sounds generated by the yellowfin sole fishery and the decline in walrus numbers are not available. However, Federal and State agencies, Native groups, and conservation organizations are concerned that these sounds are likely disturbing walrus to the point of adversely affecting their use of beaches in the region for hauling out. The Council believes that circumstantial evidence is sufficiently compelling to warrant corrective measures. Accordingly, the Council has recommended that no fishing for groundfish be allowed seaward of these haul-out sites during periods of peak walrus utilization, April 1 through September 30, for both the 1990 and 1991 fishing years. After that time, the Council may recommend further action with respect to protecting these areas as a management response intended to protect walrus. The Council proposes

that these identified areas be closed to fishing for the prescribed period. The Secretary, however, notes that similar closures are not yet imposed by the State of Alaska within the adjacent State waters. Without complementary action by the State, the Council's recommendation would likely be diminished. Also, since this measure "sunsets" in two years, the time that this measure would be in effect may be too short to determine its success. The Secretary particularly requests comment on these two issues.

5. Sablefish Allocations

Under this measure, respective sablefish TACs in the Bering Sea and in the Aleutian Island subareas would be allocated to users of trawl gear and fixed gear in the following proportions:

Bering Sea subarea: trawl gear—50 percent and fixed gear—50 percent; and
Aleutian Islands subarea: trawl gear—25 percent and fixed gear—75 percent.

The purpose of this measure is to allocate shares of sablefish to the separate gear types such that each would be monitored independently of the other. Fisheries by the separate gear types could then be closed separately, which would, therefore, prevent one gear type from harvesting amounts of sablefish that the other gear type might have depended upon. Since the collective users of each gear type would have a set percentage of the sablefish TAC, they would be able to make more accurate business decisions as to how much sablefish they could depend on for harvest. The need to establish separate quotas by gear types in the BSAI became apparent in 1988 for the first time as a result of an inseason management action implemented by the Secretary.

In 1988, the Secretary determined that the sablefish TAC was insufficient to accommodate both a directed and bycatch harvest in the Bering Sea subarea. The Secretary, therefore, closed the Bering Sea subarea sablefish directed fishery on June 11, prior to the attainment of TAC (53 FR 22328, June 15, 1988). The Secretary took this action, because the attainment of the sablefish TAC would otherwise have required the Secretary to either close the groundfish fisheries that take sablefish as bycatch or prohibit retention of sablefish bycatch for the remainder of the year. The former would have imposed a substantial cost on the groundfish industry in terms of foregone catch and earnings and the latter would have resulted in substantial waste and potentially unaccounted for fishing mortality. In 1989 it was determined that the entire initial TAC was needed to support the bycatch needs of other directed groundfish fisheries.

The Magnuson Act requires that conservation and management measures prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery. While the NMFS action can be justified in these terms, the effect of this action was perceived to be a *de facto* allocation of sablefish to the non-directed fisheries, which are primarily trawl fisheries.

Trawl fisheries take the largest amount of the total groundfish harvest of all the gear types. Since some amounts of sablefish are caught as bycatch in the trawl fisheries, a disproportionate share of sablefish could be taken in the trawl fisheries, depending on the percentage used to define directed fishing for sablefish. In 1988, 20 percent was used to define directed fishing, which meant that even though the Secretary had closed the directed sablefish fishery, all vessels including those using trawl gear could still have caught amounts of sablefish less than 20 percent of the total amounts of groundfish on board. Since large amounts of other groundfish species, for example pollock and flounder had already been caught, trawl fishermen could target on sablefish, albeit illegally, with the result that the amount of sablefish would still be less than 20 percent of their total catch. Such action could rapidly consume the sablefish TAC and leave little or no amounts of sablefish for fixed gear users.

Amendment proposals requesting the Council to consider the allocation issue were submitted by representatives of both the trawl and fixed gear sectors of the industry. Given that the total TAC for sablefish in the Bering Sea will be harvested whether or not a directed fishery exists, the concern is not with the level of the sablefish TAC, but rather with its gear/mode allocation between fixed and trawl gear. Trawlers have typically been identified with the bycatch of sablefish, especially in the pollock, Pacific cod, Greenland turbot, and Pacific ocean perch fisheries. Users of hook-and-line gear have accounted for the majority of the directed sablefish catch. However, hook-and-line fisheries targeting on Pacific cod and Greenland turbot also take sablefish as bycatch.

For most of the 1989 fishing year, an emergency rule has redefined sablefish directing fishing to mean fishing that results in the retention of sablefish of 1 percent or more of the total amounts of fish and fish products on board, except Greenland turbot and Pacific ocean perch, plus 10 percent of the amounts of Greenland turbot and Pacific ocean perch. Thus, fishermen using trawl gear would have a much reduced incentive to top off their loads with sablefish when the allowable amount of sablefish on board might only be less than 1 percent of the total amount of groundfish. In fact, in the Bering Sea subarea where sablefish is only a bycatch fishery, the total amount of sablefish that has been harvested as of the June 20–23, 1989 Council meeting was less than 15 percent of the TAC. If trawl vessels do not harvest a disproportionate share of the sablefish TAC as a result of the percentage used to define sablefish directed fishing, more sablefish would be available to fixed gear users.

The Council, upon reviewing the status of the 1988 and 1989 sablefish catches in the BSAI and upon reviewing public testimony and the EA/RIR/IRFA, has recommended that the Secretary implement this sablefish allocation measure. At this time, the Secretary is publishing this measure to gain public comment and to review the result of the analyses supporting this measure. Prior to the conclusion of the time allocated to him under the Magnuson Act, he will determine whether this measure meets the test of the national standards contained in the Magnuson Act as well as standards in other applicable law.

6. Shelikof Strait District

Under this measure, an area known as Shelikof Strait in the Gulf of Alaska and presently part of the Central Regulatory Area would be established as a management district for purposes of managing harvests of pollock. Provisions for regulating the harvest of pollock from the Shelikof Strait District are needed to protect the spawning stock. During the last decade, a significant portion of the Gulf of Alaska pollock stock has spawned in the Shelikof Strait region. These large spawning concentrations became the target of a commercially important fishery. The best available information on the condition of the Gulf of Alaska pollock stock indicates that the stock has experienced a significant decline. If the pollock stock remains at a low level of abundance, it may be necessary to adopt strict conservation measures to protect the spawning stock. One type of conservation measure would be to regulate the harvest of pollock in the Shelikof Strait area. To implement this type of regulation a new Shelikof Strait management region must be defined.

Total biomass estimates for the Gulf of Alaska pollock stock are derived from hydroacoustic and bottom trawl survey data collected by the Northwest and Alaska Fisheries Center (NWAFC).

Hydroacoustic surveys were conducted in 1981, and annually since 1983. The annual hydroacoustic surveys were conducted in Shelikof Strait and focused on aggregations of pollock while they were in spawning condition (March–April). Since few pollock were believed to be present outside of Shelikof Strait during this time, the information obtained from the hydroacoustic surveys was thought to represent most of the pollock biomass occurring in the Western/Central Regulatory Area. Bottom trawl surveys of the entire Western and Central regions of the Gulf of Alaska were conducted in 1984 and 1987 during the summer (May–September). The bottom trawl survey data provides information on the distribution and abundance of pollock during their summer feeding period.

Recent estimates of pollock biomass in the Gulf of Alaska show biomass peaked in 1981 and declined rapidly in subsequent years. The 1988 hydroacoustic survey in Shelikof Strait produced a biomass estimate that was the lowest on record. The low biomass is attributed to poor recruitment of the 1984 and 1985 year classes. Information obtained from the 1987 triennial bottom trawl survey also showed a decline in pollock biomass between 1984 and 1987; however, the decline in biomass was not as large as the hydroacoustic survey suggested. Because the 1987 bottom trawl biomass estimate was substantially higher than the 1988 hydroacoustic survey estimate, the premise that hydroacoustic surveys in Shelikof Strait provide the best estimates of pollock abundance for the entire Western/Central Regulatory Area is being questioned.

Because of the apparent decline in pollock biomass, the Council recommended a limited quota for the Shelikof Strait region in 1989. The limited quota was imposed as a conservation measure to protect pollock, which in past years has been harvested in Shelikof Strait to obtain roe from mature female pollock. The Secretary concurred with the Council's recommendation and adjusted the TAC under the inseason management authority contained in § 672.22 such that no more than 6,250 mt of pollock may be harvested in Shelikof Strait. The Secretary requested that fishermen use "621" as the statistical area for purposes of reporting Shelikof Strait pollock harvests on catch reports required under § 672.5.

The Council, therefore, recommends that a separate Shelikof Strait district be established to provide a mechanism for monitoring the amount of pollock harvested from Shelikof Strait in future years. The Council proposes that the FMP be amended to establish the Shelikof Strait District to provide the necessary regulatory basis for managing pollock, including regulations to require reporting as is the current practice in other management areas.

The coordinates defining the proposed Shelikof Strait district are listed at § 672.2 of this rulemaking. In order to maintain the time series of historical catches based on International North Pacific Fisheries Commission (INPFC) statistical areas, two statistical areas, numbered 621 and 631, are proposed. The two reporting areas would be divided at 154° W. longitude, which would be consistent with the current reporting procedures used in the NWAFC observer database and the Pacific Fisheries Information Network (PacFIN) database.

7. Kodiak Island Trawl Area Closures

Under this measure, Type I and Type II closed areas of the EEZ now in effect through December 31, 1989 would be extended until December 31, 1992. Type I areas are closed to bottom trawling year-round. Type II areas are closed to bottom trawling from February 15 to June 15. These closures were implemented as part of Amendment 15 to the FMP for reasons that remain unchanged from those contained in the final rule implementing that amendment (49 FR 7868, March 13, 1987). The purpose of this measure is to extend protection to severely depressed king crab stocks for another three years in the vicinity of Kodiak Island where king crab are caught incidentally as bycatch in the bottom trawl fisheries.

This bycatch control measure was developed by the Council to provide an environment conducive to the recovery of king crab stocks around the island at a time of developing groundfish bottom trawl fisheries. This measure afforded protection to king crab in some areas during their molting or soft-shell period while in other areas it protected crab from bottom trawls year-round. The current expiration date of December 31, 1989, was selected under Amendment 15 to necessitate a review of the status of the crab stocks, and determine whether these measures are effective and should be continued.

The Type I and Type II areas of the EEZ continue to protect about 85 percent of the Kodiak Island king crab resource from bottom trawls during their softshell period and also protect 70 percent of the king crab resource year-round. These closures still provide bottom trawl fishing opportunities geographically close to established processing and support facilities. These measures are still considered vital if the king crab stocks are to recover in this area.

Either of these two types of areas could be expanded by a third type of closed area, referred to as a "Type III" area. The Type III expansion would be the result of what is referred to by the Council as a "recruitment event", which is the appearance of female king crab in sufficient numbers that indicate that the rebuilding schedule for king crab is effective and that further protection of female and prerecruit king crab is warranted to bolster the rebuilding success. Type III closure areas would protect juvenile king crab in areas which have been noted as important rearing areas or migratory pathways and would increase the probability of a king crab population recovery.

The Council has coordinated this measure with Kodiak area fishing representatives. Insufficient time has passed since its implementation in 1986 to determine the extent of improvement for king crab stocks, but biologists and the Kodiak area fishing industry generally believe that king crab stocks will continue to improve under this measure, albeit improvement is expected to be slow. The Council proposes this measure.

8. Interim Pacific Halibut Prohibited Species Catch Limits

Under this measure, interim prohibited species catch (PSC) limits would be established in the Gulf of Alaska for fixed gear and for trawl gear for the 1990 fishing year only. Fixed gear, which includes hook-and-line gear and pot gear would be allocated 750 mt. Trawl gear would be allocated 2,000 mt. The purpose of this measure is to allocate specific amounts of halibut PSCs to the two gear types for the 1990 fishing year so that PSC amounts and closures for the two gear types are independent of each other. During 1990, the Council intends to develop a regulatory amendment that would prohibit further fishing by hook-and-line gear fishermen as well as trawl fishermen if they were to reach a PSC limit, but retain after 1990 the framework procedures currently used to establish PSC limits, which are set forth in paragraph 672.20(f) in 50 CFR Part 672.

The incidental catch of halibut is a major bycatch management issue in the Gulf of Alaska. Halibut are distributed throughout the Gulf of Alaska and are taken as bycatch by all gear groups, including hook-and-line, pot, and trawl gear. In 1985, the Council adopted Amendment 14 to the GOA FMP, which

included a halibut bycatch management regime. The amendment established the halibut PSC framework procedure whereby the Secretary, in consultation with the Council, could manage halibut bycatch. The amendment intended, for example, that halibut PSC limits could be allocated to separate gear groups, including trawl and fixed gear. If either gear group reached its share of the halibut PSC allocation, just that gear group would be prohibited from further fishing. The regulations at § 672.20(f), however, that implemented the PSC framework procedure resulted in significantly less flexibility. Under the regulations, even though all catches of halibut are counted against the halibut PSC, only bottom trawling is prohibited if the halibut PSC is reached.

Under this regime, the Council has managed the incidental catch of halibut in the Gulf by annually determining a halibut PSC mortality limit. Since 1985, the Council has set the PSC limit at 2,000 mt. Industry representatives for trawl gear users have repeatedly testified that the way halibut are counted against the PSC is unfair when only trawl gear is affected. The Council recommended at its June 1989 meeting that the regulations be amended such that hook-and-line and pot gear would be closed independently of trawl gear. Establishing annual PSCs that would be allocated to fixed gear and trawl gear would continue to be accomplished through the framework procedure. A regulatory amendment to allow the Secretary to close fixed gear users independently of trawl gear will be the subject of future proposed rulemaking.

Industry representatives testified that PSC limits of 2,000 mt for trawl gear and 750 mt for fixed gear should be set for the 1990 fishing year. The Council, therefore, recommends that these limits be implemented, but that after 1990, the existing framework procedure for setting annual PSC limits would supercede these fixed limits. The Council intends that if the aggregated bycatch of halibut caught by hook-and-line or pot gear reaches 750 mt, further fishing by those gear types would be prohibited. The Council further intends that if the bycatch caught by trawl gear reaches 2,000 mt, further fishing with bottom trawl gear would be prohibited. The Council proposes to set halibut PSC limits of 750 mt for fixed gear and 2,000 mt for trawl gear for the 1990 fishing year only.

9. Examples of Forms

The following forms are provided as examples of forms that may be used in implementing the proposed rule. These forms will not appear in the Code of Federal Regulations.

BILLING CODE 3510-22-M

CATCHER/PROCESSOR DAILY CUMULATIVE PRODUCTION LOG

PAGE	YEAR-MON-DAY	VESSEL NAME/ADF&G #	FEDERAL STATISTICAL AREA	GEAR TYPE	OPERATOR	Crew Size: Fishing / Processing / Other / Total

TRAWL OR SET NO.	SET TIME	SET POSITION	SEA DEPTH	TRAWL DEPTH	HAULING TIME	HAULING POSITION	HAUL OR SET DURATION	NUMBER OF SKATES OR POTS	NUMBER OF HOOKS OR POTS PER SKATE	ESTIMATED CATCH WEIGHT (MT)
TOTAL										

DISCARDED SPECIES

SPECIES											
DAILY DISCARD AMOUNT											

RETAINED PRODUCT INFORMATION

SPECIES/ PRODUCT TYPE[1]											
BALANCE FORWARD											
DAILY TOTAL											
CUMULATIVE TOTAL FOR WEEK											

1/ Refer to instructions for product type codes

MOTHERSHIP VESSEL CATCH RECEIPT AND DAILY CUMULATIVE PRODUCTION LOG

PAGE	YEAR-MON-DAY	VESSEL NAME	FEDERAL STATISTICAL AREA	GEAR TYPE	OPERATOR	Processing / Other / Total	Crew Size

CODEND NO.	RECEIPT TIME	RECEIPT POSITION	VESSEL NAME	ADF&G VESSEL NO.	ESTIMATED CATCH RECEIPT WEIGHT (MT)

DISCARDED SPECIES

SPECIES											
DISCARD AMOUNT											

RETAINED PRODUCT INFORMATION

SPECIES/ PRODUCT TYPE[1]											
BALANCE FORWARD											
DAILY TOTAL											
CUMULATIVE TOTAL FOR WEEK											

1/Refer to instructions for product type codes

SHORESIDE PROCESSOR CATCH RECEIPT AND DAILY CUMULATIVE PRODUCTION LOG

PAGE	YEAR-MON-DAY	PLANT NAME/AK ST.PROC.CODE	FEDERAL STATISTICAL AREA	GEAR TYPE	EMPLOYMENT Processing: Other :

FISH TICKET NUMBER	VESSEL NAME	ADF&G VESSEL NO.	RECEIPT TIME	ESTIMATED CATCH RECEIPT WEIGHT (MT)

DISCARDED SPECIES

SPECIES											
DAILY DISCARDS											

RETAINED PRODUCT INFORMATION

SPECIES/ PRODUCT TYPE[1]											
BALANCE FORWARD											
DAILY TOTAL											
CUMULATIVE TOTAL FOR WEEK											

1/ Refer to instructions for product type codes

CATCHER VESSEL DAILY FISHING EFFORT LOG

PAGE	YEAR-MON-DAY	VESSEL NAME/ADG&G #	FEDERAL STATISTICAL AREA	GEAR TYPE	OPERATOR	CREW SIZE

TRAWL OR SET NO.	SET TIME	SET POSITION	SEA DEPTH	TRAWL DEPTH	HAULING TIME	HAULING POSITION	HAUL OR SET DURATION	NUMBER OF SKATES OR POTS	NUMBER OF HOOKS OR POTS PER SKATE	ESTIMATED CATCH WEIGHT (MT)
TOTAL										

DISCARDED SPECIES

SPECIES											
DAILY DISCARD AMOUNT											

ALASKA GROUNDFISH

SHORESIDE PROCESSOR PRODUCT TRANSFER LOG

National Marine Fisheries Service
P.O. Box 21668, Juneau, AK 99802
Telex: RCA 45-377 NMFS AKR JNU
Rapicom: 907-586-7131
Telephone: 907-586-7229

Page #	
Receive	
Shipment	

Representative Phone Number Fax or Telex Number

Plant Name Plant location Alaska State Processor Code

A. Name of other agent involved in transfer (if a vessel, list port of landing in Part C, below).

B. Date and Time of Product Transfer

Start: Date_____ Time_____(GMT)

Finish: Date_____ Time_____(GMT)

C. Intended designation of agent receiving product (including port of landing of vessel receiving product transfer):

D. Products and quantities offloaded:

SPECIES	PRODUCT CODE	NO. OF CARTONS	*CARTON WT. KG OR LBS	TOTAL WT. (MT)	SPECIES	PRODUCT CODE	NO. OF CARTONS	*CARTON WT. KG OR LBS	TOTAL WT. (MT)

ALASKA GROUNDFISH

FLOATING PROCESSOR PRODUCT TRANSFER/OFFLOADING LOG

National Marine Fisheries Service
P.O. Box 21668, Juneau, AK 99802
Telex: RCA 45-377 NMFS AKR JNU
Rapicom: 907-586-7131
Telephone: 907-586-7229

Page #	
Receive	
Offload	

Representative Phone Number Fax or Telex Number

Vessel Name Federal Permit Number Call Sign

A. Other vessel involved in transfer (if landed, list port of landing):

Name of other vessel Federal Permit Number Call Sign

B. Date and Time of Product Transfer

Start: Date_____ Time_____(GMT)

Finish: Date_____ Time_____(GMT)

C. Position Transfered

Latitude:_____N Longitude:_____W,E

D. Intended port of landing of vessel receiving product:

E. Products and quantities offloaded:

SPECIES	PRODUCT CODE	NO. OF CARTONS	*CARTON WT. KG OR LBS	TOTAL WT. (MT)	SPECIES	PRODUCT CODE	NO. OF CARTONS	*CARTON WT. KG OR LBS	TOTAL WT. (MT)

ALASKA GROUNDFISH PROCESSOR WEEKLY PRODUCTION REPORT

Representative | Phone number | Fax or Telex number

Vessel name (or plant name) | Federal permit number (for shoreside plant, Alaska State Processor Code) | Call sign

Reporting period (indicate fishing week ending on Saturday) | Gear type (one per page)

	THIS SECTION FOR RETAINED AND PROCESSED CATCH						THIS SECTION FOR DISCARDED SPECIES			
	Federal statistical area: Days fished or received fish: Total estimated catch weight/receipt:			Federal statistical area: Days fished or received fish: Total estimated catch weight/receipt:			Allocated species		Prohibited species	
Species	Prod type	Prod wt	Prod type / Prod wt	Prod type	Prod wt	Prod type / Prod wt	Amount (0.1 mt)	Stat. area	Species name	Stat. Amount area (0.1mt or nos)
Pollock	/		/	/		/	/			/
Pacific cod	/		/	/		/	/			/
Sablefish	/		/	/		/	/			/
Yellowfin sole	/		/	/		/	/			/
Greenland turbot	/		/	/		/	/			/
Arrowtooth flounder	/		/	/		/	/			/
Rock sole	/		/	/		/	/			/
Other flatfish	/		/	/		/	/			/
POP complex (BSA)	/		/	/		/	/			/
Other rockfish (BSA)	/		/	/		/	/			/
Slope rockfish (GOA)	/		/	/		/	/			/
Pelagic shelf rockfish (GOA)	/		/	/		/	/			/
Demersal shelf rockfish (GOA)	/		/	/		/	/			/
Thornyhead	/		/	/		/	/			/
Atka mackerel	/		/	/		/	/			/
Squid	/		/	/		/	/			/
Other groundfish	/		/	/		/	/			/

1/ Refer to regulations for definition of species/species groups
2/ Refer to instructions for product type codes.
3/ Product weights should be reported to the nearest 0.1 metric ton (220 lbs.)

National Marine Fisheries Service
P.O. Box 21668, Juneau, AK 99802
Telex: RCA 45-377 NMFS AKR JNU

ALASKA GROUNDFISH PROCESSOR MONTHLY PRODUCT VALUE REPORT

Representative | Phone Number | Fax or Telex Number

Vessel Name(s) / Plant Name(s)

Federal Permit Number(s) / Alaska State Processor Number(s):

Month and Year:

Species	Product type	Product size or grade	Product wt	Product value	Product type	Product size or grade	Product wt	Product value	Product type	Product size or grade	Product wt	Product value
Pollock												
Pacific Cod												
Sablefish												
Yellowfin sole												
Greenland turbot												
Arrowtooth flounder												
Rock sole												
Other flatfish												
POP Complex (BSA)												
Other rockfish (BSA)												
Slope rockfish (BSA)												
Pelagic shelf rockfish (GOA)												
Demersal shelf rockfish (GOA)												
Thornyhead												
Atka mackeral												
Squid												

CONFIDENTIAL

MARINE MAMMAL LOG

If you intend to fish in 1991 and want to renew your exemption certificate, please check this box. ☐

Exemption No. : _____ CG Documentation No. : _____ State Vessel Registration No. : _____

A Complete Set of Instructions are Included on the Back of this Form.

This form must be kept current and available for inspection.
The form must be filled out each day you fish, whether or not you interact with a marine mammal.
Submit completed forms to your Regional Office at any time, however, all report forms must be received no later than December 31.

					GEAR INTERACTIONS			DETERRENCE FROM GEAR OR CATCH					LOSS DUE TO MARINE MAMMAL	
DATE	HOURS FISHED	FISHERY CODES	AREA FISHED	MARINE MAMMAL SPECIES CODES	TOTAL NO. INVOLVED	NO. INJURED	NO. KILLED	TOTAL NO. HARASSED	NO. INJURED	NO. KILLED	METHOD	EFFECTIVE Y or N	FISH LOST Y or N	GEAR LOST Y or N

BILLING CODE 3510-22-C

OMB Number : 0648-0225
Expiration Date : 06/30/92

Classification

This proposed rule is published under section 304(a)(1)(C) of the Magnuson Act as amended by Pub. L. 99–659, which requires the Secretary to publish regulations proposed by the Council within 15 days of receipt of the fishery management plan amendment and regulations. At this time the Secretary has not determined that the amendments these regulations would implement are consistent with the national standards, other provisions of the Magnuson Act, and other applicable law. The Secretary, in making these determinations, will take into account the data and comments received during the comment period.

The Council prepared an environmental assessment (EA) for these amendments and concluded that a significant impact on the environment will not occur as a result of this rule. A copy of the EA may be obtained from the Council at the address above and comments on it are requested.

The Under Secretary for Oceans and Atmosphere (Under Secretary) determined that this proposed rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. This determination is based on the EA/RIR/IRFA prepared by the Council. A copy of the EA/RIR/IRFA may be obtained from the Council at the address above.

The Under Secretary concludes that this proposed rule, if adopted, would have significant effects on small entities. These effects have been discussed in the EA/RIR/IRFA, a copy of which may be obtained from the Council at the address above.

The Under Secretary determined that this proposed rule contains a collection of information requirement subject to the Paperwork Reduction Act. This collection of information requirement has been submitted to the Office of Management and Budget for approval. Most of the information collected under the proposed recordkeeping and reporting requirements is effort, production and value information normally maintained by the groundfish vessel operators and processing plant owners for their own internal business purposes. Public recordkeeping and reporting burden for this collection of information is limited to the amount of time necessary for vessel operators and processor plant owners to transfer this information to the required logbook or report and to submit this information to the NMFS. The additional burden is estimated to average 30 to 36 hours per year (about 10 to 13 minutes per day) for floating processors, 24 hours per year (less than 20 minutes per day) for shoreside processing plants, and 5.5 hours per year (about 10 minutes per day) for vessels harvesting groundfish. These estimates include the time for reviewing instructions, gathering and maintaining the data needed, and completing and reviewing the collection of information. The proposed rule (§ 672.5(c)(1)(ii) and § 675.5(c)(1)(ii)) makes a minor change to an existing regulation that requires catcher/processors and mothership processors to submit checkin/checkout reports to NMFS, Alaska Region. The burden associated with this regulation averages less than 10 minutes per response and is approved under OMB No. 0648–0213. Send comments regarding these burden estimates or any other aspect of this collection of information, including suggestions for reducing this burden to the NMFS at the address above, and to the Office of Information and Regulatory Affairs, Office of Management of Budget, Washington, DC 20503 (Attn. NOAA Desk Officer).

The Council determined that this rule, if adopted, will be implemented in a manner that is consistent to the maximum extent practicable with the approved coastal zone management program of Alaska. This determination has been submitted for review by the responsible State agencies under section 307 of the Coastal Zone Management Act.

This proposed rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612.

List of Subjects in 50 CFR Parts 611, 620, 672, and 675

Fisheries, Fishing vessels, Reporting and recordkeeping.

Dated: August 25, 1989.

James E. Douglas, Jr.,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 C.F.R. Parts 611, 620, 672, and 675 are proposed to be amended as follows:

PART 611—FOREIGN FISHING

1. The authority citation for Part 611 continues to read as follows:

Authority: 16 U.S.C. 1801 *et seq.*

2. In § 611.92, paragraph (c)(2)(i) is revised to read as follows:

§ 611.92 Groundfish of the Gulf of Alaska.

* * * * *

(c) * * *

(2) * * *

(i) The catch and retention of the amount of any groundfish in the Gulf of Alaska for which a nation has an allocation is permitted during fishing seasons specified at 50 CFR 672.23, except in the following circumstances:

* * * * *

3. In § 611.93, paragraph (b)(3)(i) is revised and paragraph (c) is amended by redesignating paragraphs (c)(2) through (c)(4) as (c)(3) through (c)(5) and adding a new paragraph (c)(2) to read as follows:

§ 611.93 Bering Sea and Aleutian Islands groundfish fishery.

* * * * *

(b) * * *

(3) * * *

(i) The catch and retention of the amount of any groundfish in the Bering Sea and Aleutian Islands management area for which a nation has an allocation is permitted during fishing seasons specified at 50 CFR 675.23, except in the following circumstances:

* * * * *

(c) * * *

(2) *Fishing.* No fishing is allowed in that part of the Bering Sea Subarea shoreward of a line on which each point is 12 miles from the baseline used to measure the Territorial Sea around islands named Round Island and The Twins as shown on National Oceanic Survey Chart INT 500, and around Cape Pierce (160°10′ W. longitude, 58°40′ N. latitude) during April 1 through September 30 of each of the 1990 and 1991 fishing years.

* * * * *

PART 620—GENERAL PROVISIONS FOR DOMESTIC FISHERIES

4. The authority citation for Part 620 reads as follows:

Authority: 16 U.S.C. 1801 *et seq.*

5. Section 620.3 is amended by revising paragraph (d) as follows:

§ 620.3 Relation to other laws.

* * * * *

(d) *Marine mammals.* Regulations governing exemption permits and the recordkeeping and reporting of the incidental take of marine mammals are set forth at Parts 216 and 229 of this title.

* * * * *

PART 672—GROUNDFISH OF THE GULF OF ALASKA

6. The authority citation for Part 672 reads as follows:

Authority: 16 U.S.C. 1801 *et seq.*

7. In § 672.2, the definition of the *Shelikof Strait District* is added and the definition of *Statistical area* is revised to read as follows:

* * * * *

Shelikof Strait district means all waters of the EEZ enclosed by a line connecting the following points in the order listed:

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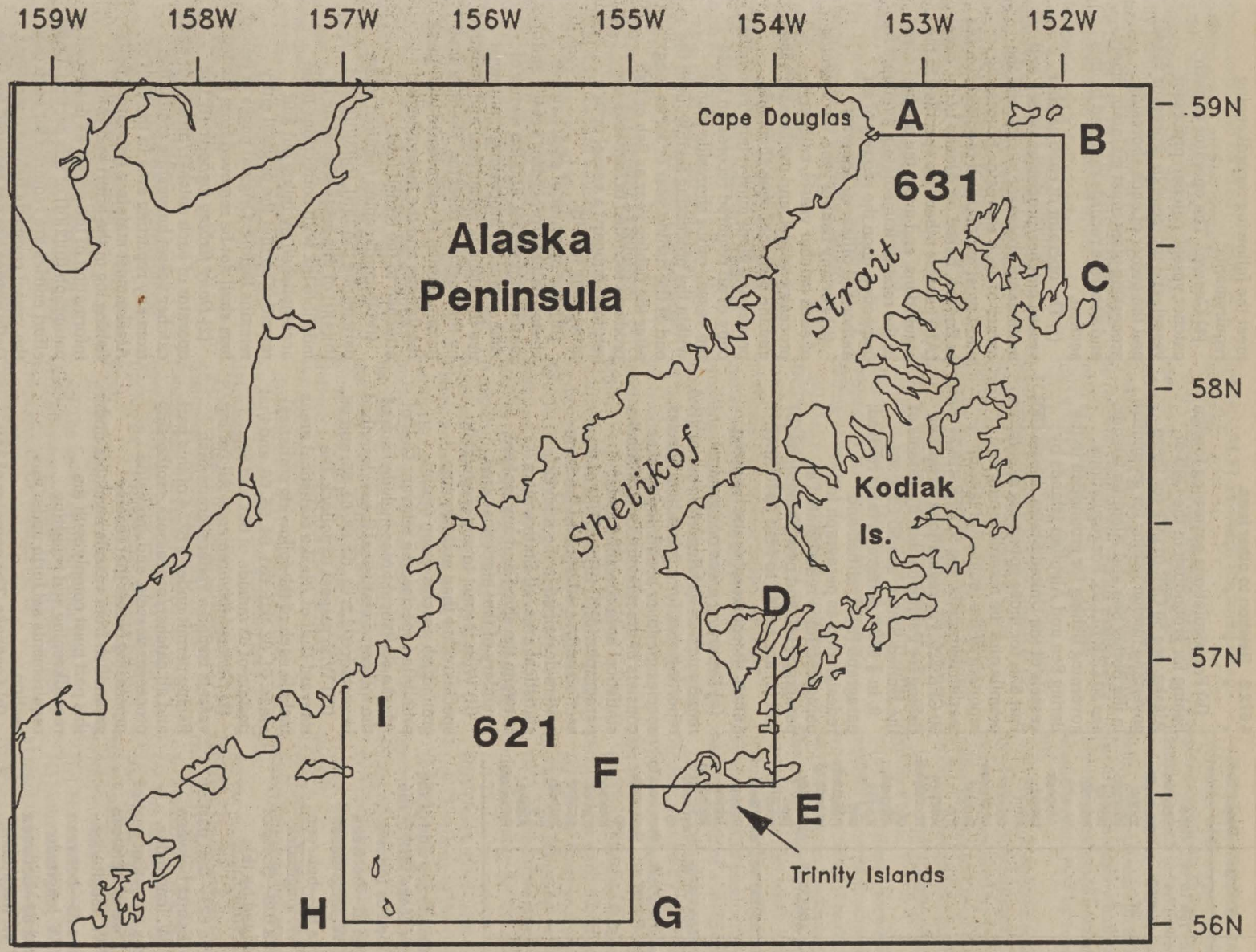


Figure 1. Boundaries of the Shelikof Strait District in the Gulf of Alaska

BILLING CODE 3510-22-C

Reference point	N. lat.	W. long.	Description
A	58°51′ N.	153°15′ W.	Cape Douglas
B	58°51′ N.	152°00′ W.	then south to the intersection of 152°00′ W. with Afognak Island, then counter clockwise around the western shorelines of Afognak, Kodiak, and Raspberry Islands to
D	57°00′ N.	154°00′ W.	Alitak Bay then south to
E	56°30′ N.	154°00′ W.	then west through Trinity Islands to
F	56°30′ N.	155°00′ W.	then south to
G	56°00′ N.	155°00′ W.	then west to
H	56°00′ N.	157°00′ W.	then north to
I			Intersection of 157°00′ W. with the Alaska Peninsula.

* * *

Statistical area means any one of the nine statistical areas of the EEZ in the Gulf of Alaska defined as follows:

(1) Statistical Area 61—between 170°00′ and 159°00′ W. longitudes;

(2) Statistical Area 62—between 159°00′ and 154°00′ W. longitudes;

(3) Statistical Area 620—Shelikof Strait district as defined by this paragraph.

(4) Statistical Area 621—that part of the Shelikof Strait District between 157°00′ and 154°00′ W. longitudes.

(5) Statistical Area 631—that part of the Shelikof Strait District between 154°00′ and 152°00′ W. longitudes.

(6) Statistical Area 63—between 154°00′ and 147°00′ W. longitude;

(7) Statistical Area 64—between 147°00′ and 140°00′ W. longitudes;

(8) Statistical Area 65—east of 137°00′ W. longitude and north of 54°30′ N. latitude;

(9) Statistical Area 68—between 140°00′ and 137°00′ W. longitudes.

8. Section 672.3 is amended by revising paragraph (b) as follows:

§ 672.3 Relation to other laws.

* * * * *

(b) For regulations governing foreign fishing for groundfish in the Gulf of Alaska, see 50 CFR 611.92; for those governing foreign fishing for groundfish in the Bering Sea and Aleutian Islands, see 50 CFR 611.93. For regulations governing fishing for groundfish in the Bering Sea and Aleutian Islands by vessels of the United States, see 50 CFR Part 675; for those governing exemption permits and the recordkeeping and reporting of the incidental take of marine mammals, see 50 CFR 216.24 and 50 CFR 229. For regulations governing fishing for Pacific halibut by vessels of the United States, see 50 CFR 301.

9. In § 672.5 paragraph (a) is revised; paragraph (b) is retitled and redesignated as paragraph (d), paragraph (c) is redesignated as paragraph (e), and new paragraphs (b) and (c) are added to read as follows:

§ 672.5 Recordkeeping and reporting.

(a) *Reporting areas and general requirements.*—(1) *Reporting areas.* (i) A reporting area for a groundfish species, species group, or prohibited species consists of the relevant Gulf of Alaska statistical area specified under paragraphs (a)(1) (ii) and (iii) of this section and, in addition to the State waters described in the relevant statistical area, all State waters between the shore and any inshore boundary of that statistical area.

(ii) With respect to any groundfish species, other than pollock, any groundfish species group or any prohibited species, the relevant Gulf of Alaska statistical areas include each of the following statistical areas described in section 672.2: 61, 62, 63, 64, 65, and 68.

(iii) With respect to pollock, the relevant Gulf of Alaska statistical areas include each of the following statistical areas: 61, 62, 621, 631, 64, 65, 68, and that portion of 63 outside of 621 and 631.

(2) *General requirements.* All fishing vessels issued a Federal groundfish fishing permit under § 672.4 of this part and all catcher/processors, mothership processor vessels, and shoreside processing plants that receive groundfish from vessels regulated under this part must comply with the recordkeeping and reporting requirements set forth under this section.

(b) *Logbooks.* The operator of any catcher vessel larger than 5 net tons or of any catcher/processor vessel or mothership processor vessel, or the owner of any shoreside processing plant that harvests or processes groundfish from any reporting area in the Gulf of Alaska described in Section 672.5, must meet the following recordkeeping requirements:

(1) *General.* The operator of each catcher vessel, catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processing plant must maintain timely and accurate records required by this section.

(i) The operator of each catcher vessel, catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processing plant must maintain all required records in English, based on Alaska Local Time (ALT) unless otherwise specified in the regulations, and make the original copy of the records immediately available for inspection upon the request of an authorized officer or observer.

(ii) For any fishing year, the operator of each catcher vessel, catcher/processor vessel, and mothership vessel, and the owner of each shoreside processing plant must retain the original copy of all required records on board the vessel, or for shoreside plants, within the processing facility, until the end of the fishing year or for as long after the fishing year as fish or fish products recorded in logbooks are retained onboard a vessel or at a processing facility.

(iii) The operator of each catcher vessel, catcher/processor vessel, and mothership vessel, and the owner of each shoreside processing plant must use the logbook prescribed and provided by the Regional Director. The logs shall be maintained in accordance with these regulations and the instructions attached to the issued logs.

(iv) Recordkeeping required under paragraphs (b)(2)(ii), (b)(3)(ii), and (b)(4)(i) of this section must be in indelible ink with corrections to be accomplished by lining out and rewriting so that the original entry remains legible. Original pages in issued logs shall not be removed from the log.

(2) *Daily fishing logbook.* (i) The operator of each catcher/processor and catcher vessel harvesting groundfish from any reporting area in the Gulf of Alaska must maintain onboard a daily fishing log of the effort and catch information of the vessel as described in paragraph (b)(2)(ii) of this section. Daily effort entries are required for each day the vessel conducts fishing operations. Daily entries are not required for those days when the fishing vessel stays in port. A separate page in the daily fishing logbook must be used for each day's fishing activity. If fishing activity is conducted in more than one Gulf of Alaska reporting area during any day, a separate page in the daily fishing

logbook must also be used for each reporting area. Catcher/processor vessels will be provided with daily fishing logbooks that also record the daily production information required under paragraph (b)(3) of this section.

(ii) Contents. (A) The daily fishing log must record the following effort information on a daily basis:

(1) A consecutive page number beginning with the first day of the fishing year that the vessel started fishing operations and continuing throughout the log for the remainder of the fishing year;

(2) The date;

(3) The catcher vessel's name and ADF&G vessel number;

(4) The reporting area in which the catcher vessel is conducting fishing activity;

(5) The gear type;

(6) For hook and line and pot gear, the average number of hooks or pots per skate, size of hooks used, and average length of skates;

(7) For trawl gear, the size of net opening, codend mesh size, and average speed of tow;

(8) The vessel operator's signature;

(9) Crew size;

(10) Daily discard amounts of each groundfish species or species group to at least the nearest tenth of a metric ton (0.1 mt) round weight, and daily discard amounts of each prohibited species listed under section 672.20(e) by number, except for discard amounts of herring, which should be reported by round weight (0.1 mt).

(B) The following information must be recorded for each haul or set, as appropriate to the gear type employed:

(1) The consecutive trawl or set number, beginning with the first trawl or set of the fishing year;

(2) The time the gear was set (ALT);

(3) The set position in geographical coordinates;

(4) The sea depth;

(5) The trawl depth;

(6) The hauling time;

(7) The haul position in geographical coordinates;

(8) The duration of the set;

(9) The number of pots or skates;

(10) The estimated total weight of the catch for the trawl or set, to at least the nearest metric ton round weight.

(11) Marine mammal log form required under 50 CFR Part 229.

(iii) Maintenance of the daily fishing log. Entries in the daily fishing log as to trawl or set number, time, position, and estimated catch weight shall be updated within two hours of the hauling time. All other entries in the daily fishing log shall be updated within 12 hours of the end of the day (ALT) on which the trawl or set occurred.

(iv) Upon each delivery or landing, species discard amounts must be provided to the processor receiving the vessel's catch so that such amounts may be reported under the requirements set forth at paragraphs (c)(1)(iii)(J) and (c)(1)(iii)(K) of this section.

(v) Submission of daily fishing logs. Each vessel operator must submit a copy of the daily fishing log on a quarterly basis to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. Copies of the DFL must be submitted by May 1, August 1, November 1, and February 1 for the previous quarter's fishing activity.

(3) *Daily cumulative production log* (DCPL). (i) The operator of each catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processor that processes groundfish from any reporting area in the Gulf of Alaska must maintain on the processing vessel or within the processing facility a daily cumulative production log of catch receipt (if applicable), species discard, and retained groundfish product information as described in paragraph (b)(3)(ii) of this Section. Daily log entries are required for each day the vessel or facility receives or processes groundfish. A separate page in the daily fishing logbook must be used for each day's fishing activity. If fishing activity is conducted in more than one reporting area during any day, a separate page in the daily fishing logbook must also be used for each reporting area. For the purpose of logbook entries, a week is defined as the period from Sunday through Saturday.

(ii) Contents. (A) The DCPL must record the following information on a daily basis:

(1) A consecutive page number beginning with the first day of the fishing year the vessel started operations and continuing throughout the log for the remainder of the fishing year;

(2) The date;

(3) The vessel or plant name and ADF&G vessel number or Alaska State Processor Code, whichever is applicable;

(4) The reporting area from which the groundfish catch receipt was harvested;

(5) The gear type used to harvest the groundfish catch receipt;

(6) The vessel operator's or plant owner's signature;

(7) Information on crew size or number of employees;

(8) Daily discard amounts by a processor of each groundfish species or species group to at least the nearest tenth of a metric ton (0.1 mt) round weight, and, for each prohibited species listed under paragraph 672.20(e), daily discard amounts by number, except for discard amounts of herring, which should be reported by round weight (0.1 mt).

(9) For each species or species group for which a total allowable catch (TAC) has been specified by the Secretary under Section 672.20 of this part, and product produced during the day:

(*i*) The product by species code and product type;

(*ii*) The balance forward of species product amounts produced during a week to the nearest tenth of a metric ton (0.1 mt). (At the beginning of each week, the balance forward for species product amounts for that week will be zero).

(*iii*) The daily total product produced by species and product type to the nearest tenth of a metric ton (0.1 mt);

(*iv*) The cumulative weekly total product aboard by species and product type to the nearest tenth of a metric ton (0.1 mt).

(B) The following information must be recorded for each catch receipt:

(1) For each set or codend received by mothership processor vessels;

(*i*) A consecutive catch receipt or codend number for the day;

(*ii*) The catch receipt time;

(*iii*) The catch receipt position;

(*iv*) The name of the delivering vessel;

(*v*) The delivery vessel's Federal groundfish permit number or ADF&G vessel number;

(*vi*) Estimated catch receipt weight to at least the nearest metric ton round weight.

(*vii*) Marine mammal interaction information required under 50 CFR part 229.

(2) For each groundfish landing received by shoreside processors from catcher vessels:

(i) State of Alaska fish ticket number;

(*ii*) The name of the delivering vessel;

(*iii*) The delivery vessel's ADF&G vessel number or federal groundfish permit number;

(*iv*) The catch receipt time (ALT);

(*v*) Estimated catch receipt weight to at least the nearest metric ton round weight.

(iii) Daily maintenance of the DCPL. Entries in the DCPL as to codend or fish ticket number, receipt time, position, estimated catch receipt weight, and delivering vessel's name shall be updated within two hours of the receipt time. All other entries in the DCPL shall be updated within 12 hours of the end of

the day (ALT) on which the trawl, set, receipt, or production occurred. Product shall be logged on the day processed regardless of the day of catch or receipt. Entries for product weights must be based on the number of production units (pans, cartons, blocks, trays, cans, bags, or individually frozen fish) and the average weight of the production unit, with reasonable allowance for water added. Allowance for water added cannot exceed five percent of the gross unit weight. Product unit weights must be based on the total actual net weight of the product as determined by representative samples.

(iv) Submission of DCPL's. Each processing vessel operator or plant owner must submit a copy of the DCPL on a quarterly basis to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. Copies of the DCPL must be submitted by May 1, August 1, November 1, and February 1 for the previous quarter's processing activity.

(4) *Product transfer logbooks.* The operator of each catcher/processor vessel and mothership processor vessel, and the owner of each shoreside processor plant must record, in a separate transfer log, each offloading, shipment or receipt of any processed fishery product, including quantities transferred or off-loaded outside the EEZ, within any states' territorial waters, or within the internal waters of any state or at any shoreside facility.

(i) Contents. The transfer log must record the following information:

(A) A consecutive page number beginning with the first transfer or shipment of groundfish product in a fishing year and continuing throughout the log for the remainder of the fishing year;

(B) Whether the product transfer reflects a product receipt or shipment/offloading;

(C) Company representative's name, telephone number, and Fax or telex number;

(D) Vessel or plant name, plant location, Federal permit number or Alaska State processor code number, and radio call sign of vessel if applicable;

(E) The name of the other vessel (including Federal permit number and call sign) shipping agent, or commercial facility (including location) involved in the transfer or shipment;

(F) The time and date (ALT) and, if applicable, vessel location (in geographic coordinates, or if within a port, the name of the port) at which the transfer or shipment began and was completed;

(G) The intended destination of the carrier or vessel receiving product;

(H) For each product type by species or species group, the total net product weight transferred or shipped to the nearest one-tenth of a metric ton (0.1 mt), an estimated net weight in kilograms or pounds of product per carton, and the total number of cartons of product transferred or shipped.

(ii) Submission of transfer logs. Copies of transfer logs for each weekly period, Sunday through Saturday, ALT, must be submitted to the Regional Director within one week following the week ending date through such means as the Regional Director will prescribe. Submission of product transfer logs is only required if product transfer activity occurred during that weekly period.

(c) *Other recordkeeping and reporting requirements*—(1) *Catcher/processor vessels, mothership processor vessels, and shoreside processor plants.* The operator or owner of any vessel or shoreside processor of the United States who processes groundfish caught in the EEZ from any reporting area in the Gulf of Alaska must, in addition to the requirements of paragraphs (a) and (b) of this section, comply with the following requirements:

(i) State of Alaska Fish Tickets—(A) The operator of any mothership processor vessel, catcher/processor vessel, or the owner of any shoreside processing facility that harvests or receives groundfish harvested from any reporting area in the Gulf of Alaska or internal waters of the State of Alaska, will be responsible for the submission to ADF&G of an accurately completed State of Alaska fish ticket or an equivalent document containing all of the information required on an Alaska fish ticket. U.S. catcher vessels delivering to U.S. processors must provide to the processor information necessary for accurate completion of the fish ticket. Operators of catcher vessels to which a permit has been issued under § 672.4 of this part and who do not deliver to a catcher/processor vessel, mothership processor vessel, or shoreside processing facility are responsible for their own submission of fish tickets. Fish tickets are not required for groundfish sold or delivered to a foreign processing vessel which has a permit under § 611.92 or § 611.93 of this title.

(1) When to submit fish tickets.

(i) Shoreside processors. Owners of shoreside processing facilities must prepare and submit State of Alaska fish tickets required under paragraph (c)(1)(i) of this section to ADF&G within one week after fish are landed.

(ii) Catcher/processor vessels and mothership processor vessels. Operators of processing vessels must prepare and submit State of Alaska fish tickets required under paragraph (c)(1)(i) of this section to ADF&G within one week after returning to port. A document equivalent to a State of Alaska fish ticket may be submitted if groundfish product is landed outside of Alaska.

(iii) Catcher vessels. Operators of catcher vessels to which a permit has been issued under § 672.4 of this part and who do not deliver to a vessel at sea or to a shoreside processing facility must submit the fish ticket required under (c)(1)(i) of this section within one week after fish are landed.

(B) Address. Mail or deliver State of Alaska fish tickets to the ADF&G office located nearest to the area of groundfish purchase, or send these documents to the Director, Commercial Fish Division, Alaska Department of Fish and Game Headquarters, P.O. Box 3–2000, Juneau, Alaska 99802.

(ii) Alaska groundfish check-in report. The operator of any catcher/processor and/or mothership processor vessel must notify the Regional Director before starting and upon stopping fishing for or receiving groundfish from any reporting area in the Gulf of Alaska. Notification will be through such means as the Regional Director will prescribe, and will consist of the vessel's name, permit number (if applicable), radio call sign, date and hour (ALT) of when fishing for or receiving groundfish will begin or cease, and the latitude and longitude of such activity.

(iii) Weekly production report. After a receipt of groundfish by a shoreside plant and continuing for the rest of the year, or after notification of starting fishing by a vessel under paragraph (c)(1)(ii) of this section and continuing until that vessel's entire catch or cargo of fish has been off-loaded, the operator of that vessel or plant owner must submit a weekly product report, including reports of zero tons caught or received, for each weekly period, Sunday through Saturday, ALT, and each portion of such a weekly period. The weekly product report must be received by the Regional Director within one week of the end of the reporting period through such means as the Regional Director will prescribe. This report must contain the following information:

(A) Submitter's name, telephone number, and Fax or telex number;

(B) Name of vessel or plant and radio call sign of vessel;

(C) Federal permit number or Alaska State processor code, which ever is applicable;

(D) The ending date (Saturday) of the reporting period;

(E) Gear type used to harvest groundfish catch or catch receipt;

(F) The reporting area(s) from which each retained species or species group product was caught during the reporting period;

(G) Number of days fished or during which fish were received;

(H) The total estimated catch weight or catch receipt for each reporting area;

(I) The product type and total product weight produced during the weekly reporting period for each species or species group for which a total allowable catch (TAC) has been specified by the Secretary under Section 672.20 of this part;

(J) The amount of each groundfish species or species group discarded during the reporting period, including discard amounts provided to processors under paragraph (b)(2)(iv). Discard amounts should be reported in round weight to the nearest metric ton.

(K) The amount of each prohibited species discarded during the reporting period, including prohibited species discard amounts provided to processors under paragraph (b)(2)(iv). Discard amounts of each prohibited species listed under paragraph 672.20(e) must be reported by number, except for herring, which should be reported by round weight (0.1 mt).

(iv) Alaska groundfish processor monthly product value report. Each groundfish processor or its parent company must complete a monthly product value report for any month during which groundfish harvested from any of Gulf of Alaska reporting area were sold. Monthly product value reports must be submitted annually to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. The monthly product value reports must be received by NMFS no later than March 1 for the previous fishing year. These reports must include the following information:

(A) Name of the representative for the vessel, plant or company, telephone number, and Fax or telex number;

(B) Name of vessel(s) or plant(s);

(C) Federal permit number or Alaska State processor code, which ever is applicable;

(D) Month and year;

(E) For each species or species group for which product was sold during the month, the product type(s); Product size(s) or grade(s); product weight(s) to the nearest tenth of a metric ton (0.1 mt); and product value(s).

(d) *Groundfish utilization surveys.*

* * * * *

10. Section 672.7 is amended by adding paragraph (d) as follows:

§ 672.7 Prohibitions.

* * * * *

(d) Fish for groundfish except in compliance with the terms of an observer plan as provided by § 672.27 of this part.

* * * * *

11. In § 672.20, paragraph (a)(2) is revised, paragraph (f)(2) is suspended from January 1, 1990 through December 31, 1990, and new paragraph (f)(3) is added from January 1, 1990, through December 31, 1990, to read as follows:

§ 672.20 General limitations.

(a) * * *

(2) *Total Allowable Catch (TAC).* The Secretary, after consultation with the North Pacific Fishery Management Council (Council), will specify the annual TAC for each calendar year for each target species and the "other species" category, and will apportion the TACs among DAP, JVP, TALFF, and reserves. TACs in the target species category may be split or combined for purposes of establishing new TACs with apportionments thereof under paragraph (c)(1) of this section.

* * * * *

(f) * * *

(3) Pacific halibut PSC limits. (i) PSC limits of 2,000 mt for trawl gear and 750 mt for hook-and-line and pot gear, combined are established. Each share is allocated to DAP and to JVP in proportion to the specified DAP and JVP amount of groundfish apportionment.

(ii) Trawl gear. If during the year, the Regional Director determines that the catch of halibut by vessels using trawl gear and delivering their catch to foreign vessels (JVP vessels) or vessels using trawl gear and delivering their catch to U.S. fish processors (DAP vessels) will reach their proportional share of 2,000 mt of halibut provided for under paragraph (f)(3)(i) of this section, the Regional Director will publish a notice in the Federal Regisfer prohibiting fishing with trawl gear other than pelagic trawl gear for the rest of the year by DAP or JVP vessels in the area to which the PSC limit applies.

(iii) Hook-and-line and pot gear. If during the year, the Regional Director determines that the catch of halibut by vessels using hook-and-line and vessels using pot gear and delivering their catch to foreign vessels (JVP vessels) or vessels using hook-and-line and vessels using pot gear and delivering their catch to U.S. fish processors (DAP vessels) will reach their proportional share of 750 mt of halibut provided for under paragraph (f)(3)(i) of this section, the Regional Director will publish a notice in the **Federal Register** prohibiting fishing with hook-and-line or pot gear for the rest of the year by DAP or JVP vessels in the area to which the PSC limit applies.

12. Section 672.23 is revised to read as follows:

§ 672.23 Seasons.

(a) Fishing for groundfish during the January 1-December 31 fishing year in the statistical areas defined at § 672.2 is authorized from January 1 through December 31, subject to the other provisions of this part, except as provided in paragraph (b) of this section.

(b) Fishing for sablefish is authorized with hook-and-line gear from 12:00 noon Alaska local time on April 1 through December 31, subject to other provisions of this part.

13. In § 672.24, paragraph (c) is revised to read as follows:

§ 672.24 Gear limitations.

* * * * *

(c) *Trawls other than pelagic trawls.* (1) No person may trawl in waters of the EEZ within the following areas in the vicinity of Kodiak Island (see Figure 2, Area Type I) from a vessel having any trawl other than a pelagic trawl either attached or on board:

(i) *Alitak Flats and Towers Areas:* All water of Alitak Flats and the Towers Areas enclosed by a line connecting the following seven points in the order listed:

Reference point	N. lat.	W. long.	Land description
a	56°59'4"	154°31'1"	Low Cape.
b	57°00'0"	155°00'0"	
c	56°17'0"	155°00'0"	
d	56°17'0"	153°52'0"	
e	56°33'5"	153°52'0"	Cape Sitkinak
f	56°54'5"	153°32'5"	East point of Two-headed Island
g	56°56'0"	153°35'5"	Kodiak Island, thence, along the coastline of Kodiak Island until intersection of
a	56°59'4"	154°31'1"	Low Cape

(ii) *Marmot Flats Area:* All water enclosed by a line connecting the following five points in the clockwise order listed:

Reference point	N. lat.	W. long.	Land description
a	58°00'0"	152°30'0"	
b	58°00'0"	151°47'0"	
c	57°37'0"	151°47'0"	
d	57°37'0"	152°10'1"	Cape Chiniak, thence, along the coastline of Kodiak Island to
e	57°54'5"	152°30'0"	North Cape.
a	58°00'0"	152°30'0"	

(2) From February 15 to June 15, no person may trawl in waters of the EEZ within the following areas in the vicinity of Kodiak Island (see Figure 2, Area Type II) from a vessel having any trawl other than a pelagic trawl either attached or on board:

(i) *Chirikof Island Area:* All waters surrounding Chirikof Island enclosed by a line connecting the following four points in the counter clockwise order listed:

Reference point	N. lat.	W. long.
a	56°07'0"	155°13'0"
b	56°07'0"	156°00'0"
c	55°41'0"	156°00'0"
d	55°41'0"	155°13'0"
a	56°07'0"	155°13'0"

(ii) *Barnabas Area:* All waters enclosed by a line connecting the following six points in the counter clockwise order listed:

Reference point	N. lat.	W. long.	Land description
a	57°00'0"	153°18'0"	Black Point
b	56°56'0"	153°09'0"	
c	57°22'0"	152°18'5"	South Tip of Ugak Island
d	57°23'5"	152°17'5"	North Tip of Ugak Island
e	57°25'3"	152°20'0"	Narrow Cape, thence, along the coastline of Kodiak Island to
f	57°04'2"	153°30'0"	Cape Kasick to
a	57°00'0"	153°18'0"	Black Point, incl. inshore waters

(3) (i) *Type III Areas.* Nothwithstanding the gear restrictions in paragraphs (c)(1) and (c)(2) of this section, the Secretary, in consultation with the Council, may classify the following additional Type III as a Type I area under paragraph (c)(1) of this section or as a Type II area under paragraph (c)(2) of this section and close the expanded areas to further fishing as described by paragraph (c)(1) or (c)(2) by procedures in paragraph (c)(3)(ii) of this section:

(A) Outer Marmot Bay: All waters bounded by lines connecting the following coordinates in the order listed:

N. lat.	W. long.
58°00'00"	151°55'40"
58°02'30"	151°55'40"
58°02'30"	151°47'00"
58°04'53"	151°47'00"
58°04'53"	151°35'25"
57°57'40"	151°35'25"
57°57'40"	151°47'00"
58°00'00"	151°47'00"
58°00'00"	151°55'40"

(B) Outer Barnabas Area: All waters bounded by lines connecting the following coordinates in the order listed:

N. lat.	W. long.	Land description
57°14'30"	152°37'50"	
57°10'00"	152°25'30"	
57°02'32"	152°35'02"	
57°04'25"	152°54'15"	Then following the three mile limit line to
57°13'00"	152°49'25"	Then following the three mile limit line to
57°14'30"	152°37'50"	

(C) Horse's Head Area: All waters bounded by lines connecting the following coordinates in the order listed:

N. lat.	W. long.	Land description
56°49'55"	153°36'30"	
56°34'35"	153°05'37"	
56°28'35"	153°05'37"	
56°28'35"	153°52'05"	Then following the three mile limit line to
56°49'55"	153°36'30"	

(D) Outer Chirikof Area: All waters bounded by lines connecting the following coordinates in the order listed:

N. lat.	W. long.
56°16'45"	155°39'00"
56°16'45"	155°11'45"
55°41'00"	155°13'00"
56°07'10"	155°13'00"
56°07'10"	155°39'00"
56°16'45"	155°39'00"

(ii) Procedure. No expansion of Type I or Type II areas by the additional Type III areas described at paragraph (c)(3)(i) of this section will take effect until the Secretary has published the proposed expansion in the **Federal Register** for public comment for a period of thirty (30) days before it is made final.

(4) Each person using a trawl to fish in any area limited to pelagic trawling under paragraphs (c)(1) and (c)(2) of this section must maintain in working order on that trawl a properly functioning, recording net-sonde device, and must retain all net-sonde recordings aboard the fishing vessel during the fishing year.

(5) No person using a trawl to fish in any area limited to pelagic trawling under paragraphs (c)(1) and (c)(2) of this section will allow the footrope of that trawl to be in contact with the seabed for more than 10 percent of the period of any tow, as indicated by the net-sonde device.

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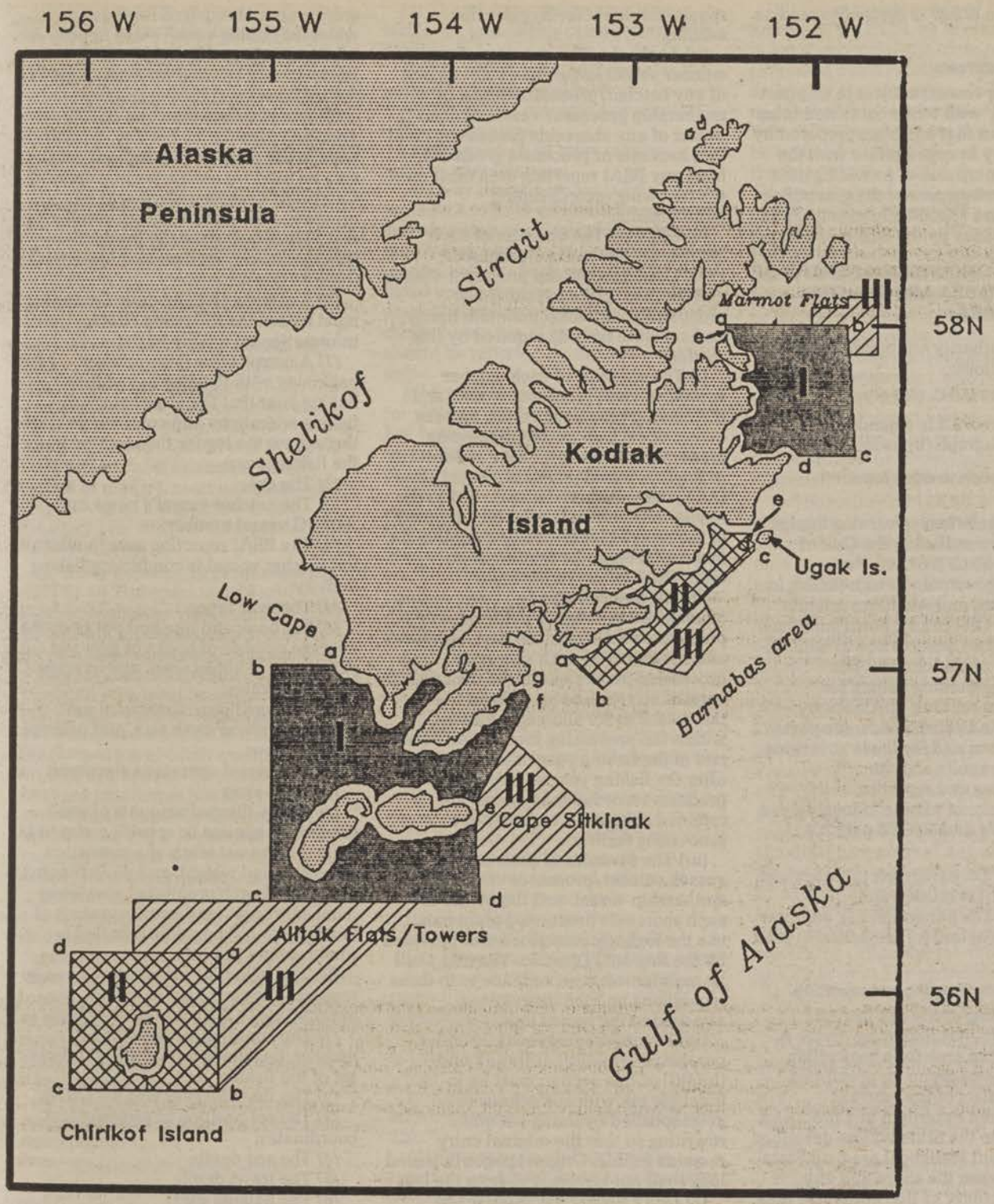


Figure 2. Areas around Kodiak Island closed to trawling except with pelagic trawls. TYPE I areas are closed year round. TYPE II areas are closed February 15 to June 15. TYPE III areas are pending. See section 672.24, Gear Limitations, for coordinate descriptions.

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14. Section 672.27 is revised to read as follows:

§ 672.27 Observers.

All fishing vessels subject to this part must comply with terms contained in an observer plan that has been prepared by the Secretary in consultation with the Council for purposes of providing data useful in management of the groundfish fishery, unless specifically exempt from such compliance by the observer plan.

PART 675—GROUNDFISH FISHERY OF THE BERING SEA AND ALEUTIAN ISLANDS AREA

15. The authority citation for part 675 reads as follows:

Authority: 16 U.S.C. 1801 *et seq.*

16. Section 675.3 is amended by revising paragraph (b) as follows:

§ 675.3 Relation to other laws.

* * * * *

(b) For regulations governing foreign fishing for groundfish in the Gulf of Alaska, see 50 CFR 611.92. For regulations governing foreign fishing in the Bering Sea and Aleutians Islands area, see 50 CFR 611.93. For regulations concerning the conservation of halibut, see part 301 of this chapter. For regulations governing fishing for groundfish in the Gulf of Alaska by vessels of the United States, see part 672 of this chapter; and for those governing exemption permits and the recordkeeping and reporting of the incidental take of marine mammals, see 50 CFR 216.24 and 50 CFR part 229.

* * * * *

17. In § 675.5, paragraph (a) is revised, paragraph (b) is retitled and redesignated as paragraph (d), and new paragraphs (b) and (c) are added to read as follows:

§ 675.5 Recordkeeping and reporting.

(a) *Reporting areas and general requirements*—(1) *Reporting areas.* A BSAI reporting area for a groundfish species, species group, or prohibited species consists of the relevant statistical area described in § 675.2 and, in addition to the State waters described in the relevant statistical area, all State waters between the shore and any inshore boundary of that statistical area.

(2) *General requirements.* All fishing vessels issued a Federal groundfish fishing permit under § 675.4 of this part and all catcher/processors, mothership processor vessels, and shoreside processing plants that receive groundfish from vessels regulated under this part, must comply with the recordkeeping and reporting requirements set forth under this section.

(b) *Logbooks.* The operator of any catcher vessel larger than 5 net tons or of any catcher/processor vessel or mothership processor vessel, or the owner of any shoreside processing plant that harvests or processes groundfish from any BSAI reporting area must meet the following recordkeeping requirements:

(1) *General.* The operator of each catcher vessel, catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processing plant must maintain timely and accurate records required by this section.

(i) The operator of each catcher vessel, catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processing plant must maintain all required records in English, based on Alaska Local Time (ALT) unless otherwise specified in the regulations, and make the original copy of the records immediately available for inspection upon the request of an authorized officer or observer.

(ii) For any fishing year, the operator of each catcher vessel, catcher/processor vessel, and mothership vessel, and the owner of each shoreside processing plant must retain the original copy of all required records on board the vessel, or for shoreside plants, within the processing facility, until the end of the fishing year or for as long after the fishing year as fish or fish products recorded in logbooks are retained onboard a vessel or at a processing facility.

(iii) The operator of each catcher vessel, catcher/processor vessel, and mothership vessel, and the owner of each shoreside processing plant must use the logbook prescribed and provided by the Regional Director. The logs shall be maintained in accordance with these regulations and the instructions attached to the issued logs.

(iv) Recordkeeping required under paragraphs (b)(2)(ii), (b)(3)(ii), and (b)(4)(i) of this section must be in indelible ink with corrections to be accomplished by lining out and rewriting so that the original entry remains legible. Original pages in issued logs shall not be removed from the log.

(2) *Daily fishing logbook.* (i) The operator of each catcher/processor and catcher vessel harvesting groundfish from any BSAI reporting area must maintain onboard a daily fishing log of the effort and catch information of the vessel as described in paragraph (b)(2)(ii) of this section. Daily effort entries are required for each day the vessel conducts fishing operations. Daily entries are not required for those days when the fishing vessel stays in port. A separate page in the daily fishing logbook must be used for each day's fishing activity. If fishing activity is conducted in more than one BSAI reporting area during the day, a separate page in the daily fishing logbook must also be used for each reporting area. Catcher/processor vessels will be provided with daily fishing logbooks that also record the daily production information required under paragraph (b)(3) of this section.

(ii) Contents. (A) The daily fishing log must record the following effort information on a daily basis:

(1) A consecutive page number beginning with the first day of the fishing year that the vessel started fishing operations and continuing throughout the log for the remainder of the fishing year;

(2) The date;

(3) The catcher vessel's name and ADF&G vessel number;

(4) The BSAI reporting area in which the catcher vessel is conducting fishing activity;

(5) The gear type;

(6) For hook and line and pot gear, the average number of hooks or pots per skate, size of hooks used, and average length of skates;

(7) For trawl gear, the size of net opening, codend mesh size, and average speed of tow;

(8) The vessel operator's signature;

(9) Crew size;

(10) Daily discard amounts of each groundfish species or species group to at least the nearest tenth of a metric ton (0.1 mt) round weight, and daily discard amounts of each prohibited species by number, except for discard amounts of herring, which should be reported by round weight (0.1 mt).

(B) The following information must be recorded for each haul or set, as appropriate to the gear type employed:

(1) The consecutive trawl or set number, beginning with the first trawl or set of the fishing year;

(2) The time the gear was set (ALT);

(3) The set position in geographical coordinates;

(4) The sea depth;

(5) The trawl depth;

(6) The hauling time;

(7) The haul position in geographical coordinates;

(8) The duration of the set;

(9) The number of pots or skates;

(10) The estimated total weight of the catch for the trawl or set, to at least the nearest metric ton round weight.

(11) Marine mammal log form required under 50 CFR part 229.

(iii) Maintenance of the daily fishing log. Entries in the daily fishing log as to trawl or set number, time, position, and estimated catch weight shall be updated within two hours of the hauling time. All other entries in the daily fishing log shall be updated within 12 hours of the end of the day (ALT) on which the trawl or set occurred.

(iv) Upon each delivery or landing, species discard amounts must be provided to the processor receiving the vessel's catch so that such amounts may be reported under the requirements set forth at paragraphs (c)(1)(iii)(J) and (c)(1)(iii)(K) of this section.

(v) Submission of daily fishing logs. Each vessel operator must submit a copy of the daily fishing log on a quarterly basis to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. Copies of the DFL must be submitted by May 1, August 1, November 1, and February 1 for the previous quarter's fishing activity.

(3) *Daily cumulative production log (DCPL).* (i) The operator of each catcher/processor vessel, and mothership processor vessel, and the owner of each shoreside processor that processes groundfish from any BSAI reporting area must maintain on the processing vessel or within the processing facility a daily cumulative production log of catch receipt (if applicable), species discard, and retained groundfish product information as described in paragraph (b)(3)(ii) of this Section. Daily log entries are required for each day the vessel or facility receives or processes groundfish. A separate page in the daily fishing logbook must be used for each day's fishing activity. If fishing activity is conducted in more than one BSAI reporting area during the day, a separate page in the daily fishing logbook must also be used for each reporting area. For the purpose of logbook entries, a week is defined as the period from Sunday through Saturday.

(ii) Contents. (A) The DCPL must record the following information on a daily basis:

(1) A consecutive page number beginning with the first day of the fishing year the vessel started operations and continuing throughout the log for the remainder of the fishing year;

(2) The date;

(3) The vessel or plant name and ADF&G vessel number or Alaska State Processor Code, whichever is applicable;

(4) The BSAI reporting area from which the groundfish catch receipt was harvested;

(5) The gear type used to harvest the groundfish catch receipt;

(6) The vessel operator's or plant owner's signature;

(7) Information on crew size or number of employees;

(8) Daily discard amounts by a processor of each groundfish species or species group to at least the nearest tenth of a metric ton (0.1 mt) round weight, and, for each prohibited species listed under paragraph 675.20(c), daily discard amounts by number, except for discard amounts of herring, which should be reported by round weight (0.1 mt).

(9) For each species or species group for which a total allowable catch (TAC) has been specified by the Secretary under Section 675.20 of this part, and product produced during the day:

(*i*) The product by species code and product type;

(*ii*) The balance forward of species product amounts produced during a week to the nearest tenth of a metric ton (0.1 mt). (At the beginning of each week, the balance forward for species product amounts for that week will be zero).

(*iii*) The daily total product produced by species and product type to the nearest tenth of a metric ton (0.1 mt);

(*iv*) The cumulative weekly total product aboard by species and product type to the nearest tenth of a metric ton (0.1 mt).

(B) The following information must be recorded for each catch receipt:

(1) For each set or codend received by mothership processor vessels;

(*i*) A consecutive catch receipt or codend number for the day;

(*ii*) The catch receipt time;

(*iii*) The catch receipt position;

(*iv*) The name of the delivering vessel;

(*v*) The delivery vessel's Federal groundfish permit number or ADF&G vessel number;

(*vi*) Estimated catch receipt weight to at least the nearest metric ton round weight.

(*vii*) Marine mammal interaction information required under 50 CFR part 229.

(2) For each groundfish landing received by shoreside processors from catcher vessels:

(*i*) State of Alaska fish ticket number;

(*ii*) The name of the delivering vessel;

(*iii*) The delivery vessel's ADF&G vessel number or federal groundfish permit number;

(*iv*) The catch receipt time (ALT);

(*v*) Estimated catch receipt weight to at least the nearest metric ton round weight.

(iii) Daily maintenance of the DCPL. Entries in the DCPL as to codend or fish ticket number, receipt time, position, estimated catch receipt weight and delivering vessel's name shall be updated within two hours of the receipt time. All other entries in the DCPL shall be updated within 12 hours of the end of the day (ALT) on which the trawl, set, receipt, or production occurred. Product shall be logged on the day processed regardless of the day of catch or receipt. Entries for product weights must be based on the number of production units (pans, cartons, blocks, trays, cans, bags, or individually frozen fish) and the average weight of the production unit, with reasonable allowance for water added. Allowance for water added cannot exceed five percent of the gross unit weight. Product unit weights must be based on the total actual net weight of the product as determined by representative samples.

(iv) Submission of DCPL's. Each processing vessel operator or plant owner must submit a copy of the DCPL on a quarterly basis to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. Copies of the DCPL must be submitted by May 1, August 1, November 1, and February 1 for the previous quarter's processing activity.

(4) *Product transfer logbooks.* The operator of each catcher/processor vessel and mothership processor vessel, and the owner of each shoreside processor plant must record, in a separate transfer log, each offloading, shipment or receipt of any processed fishery product harvested from any BSAI reporting area, including quantities transferred or off-loaded outside the EEZ, within any state's territorial waters, or within the internal waters of any state or at any shoreside facility.

(i) Contents. The transfer log must record the following information:

(A) A consecutive page number beginning with the first transfer or shipment of groundfish product in a fishing year and continuing throughout the log for the remainder of the fishing year;

(B) Whether the product transfer reflects a product receipt or shipment/offloading;

(C) Company representative's name, telephone number, and Fax or telex number;

(D) Vessel or plant name, plant location, Federal permit number or Alaska State processor code number, and radio call sign of vessel if applicable;

(E) The name of the other vessel (including Federal permit number and call sign) shipping agent, or commercial facility (including location) involved in the transfer or shipment;

(F) The time and date (ALT) and, if applicable, vessel location (in geographic coordinates, or if within a port, the name of the port) at which the transfer or shipment began and was completed;

(G) The intended destination of the carrier or vessel receiving product;

(H) For each product type by species or species group, the total net product weight transferred or shipped to the nearest one-tenth of a metric ton (0.1 mt), an estimated net weight in kilograms or pounds of product per carton, and the total number of cartons of product transferred or shipped.

(ii) Submission of transfer logs. Copies of transfer logs for each weekly period, Sunday through Saturday, ALT, must be submitted to the Regional Director within one week following the week ending date through such means as the Regional Director will prescribe. Submission of product transfer logs is only required if product transfer activity occurred during that weekly period.

(c) *Other recordkeeping and reporting requirements.*— (1) *Catcher/processor vessels, mothership processor vessels, and shoreside processor plants.* The operator or owner of any vessel or shoreside processor of the United States who processes groundfish harvested from any BSAI reporting area must, in addition to the requirements of paragraphs (a) and (b) of this section, comply with the following requirements:

(i) State of Alaska Fish Tickets—(A) The operator of any mothership processor vessel, catcher/processor vessel, or the owner of any shoreside processing facility that harvests or receives groundfish harvested from any BSAI reporting area or internal waters of the State of Alaska, will be responsible for the submission to ADF&G of an accurately completed State of Alaska fish ticket or an equivalent document containing all of the information required on an Alaska fish ticket. U.S. catcher vessels delivering to U.S. processors must provide to the processor information necessary for accurate completion of the fish ticket. Operators of catcher vessels to which a permit has been issued under § 675.4 of this part and who do not deliver to a catcher/processor vessel, mothership processor vessel, or shoreside processing facility are responsible for their own submission of fish tickets. Fish tickets are not required for groundfish sold or delivered to a foreign processing vessel which has a permit under § 611.92 or § 611.93 of this title.

(1) When to submit fish tickets.

(i) Shoreside processors. Owners of shoreside processing facilities must prepare and submit State of Alaska fish tickets required under paragraph (c)(1)(i) of this section to ADF&G within one week after fish are landed.

(ii) Catcher/processor vessels and mothership processor vessels. Operators of processing vessels must prepare and submit State of Alaska fish tickets required under paragraph (c)(1)(i) of this section to ADF&G within one week after returning to port. A document equivalent to a State of Alaska fish ticket may be submitted if groundfish product is landed outside of Alaska.

(iii) Catcher vessels. Operators of catcher vessels to which a permit has been issued under § 675.4 of this part and who do not deliver to a vessel at sea or to a shoreside processing facility must submit the fish ticket required under (c)(1)(i) of this section within one week after fish are landed.

(B) Address. Mail or deliver State of Alaska fish tickets to the ADF&G office located nearest to the area of groundfish purchase, or send these documents to the Director, Commercial Fish Division, Alaska Department of Fish and Game Headquarters, P.O. Box 3–2000, Juneau, Alaska 99802.

(ii) Alaska groundfish check-in report. The operator of any catcher/processor and/or mothership processor vessel must notify the Regional Director before starting and upon stopping fishing for or receiving groundfish from any BSAI reporting area. Notification will be through such means as the Regional Director will prescribe, and will consist of the vessel's name, permit number (if applicable), radio call sign, date and hour (ALT) of when fishing for or receiving groundfish will begin or cease, and the latitude and longitude of such activity.

(iii) Weekly production report. After a receipt of groundfish by a shoreside plant and continuing for the rest of the year, or after notification of starting fishing by a vessel under paragraph (c)(1)(ii) of this section and continuing until that vessel's entire catch or cargo of fish has been off-loaded, the operator of that vessel or plant owner must submit a weekly product report, including reports of zero tons caught or received, for each weekly period, Sunday through Saturday, ALT, and each portion of such a weekly period. The weekly product report must be received by the Regional Director within one week of the end of the reporting period through such means as the Regional Director will prescribe. This report must contain the following information:

(A) Submitter's name, telephone number, and Fax or telex number;

(B) Name of vessel or plant and radio call sign of vessel;

(C) Federal permit number or Alaska State processor code, which ever is applicable;

(D) The ending date (Saturday) of the reporting period;

(E) Gear type used to harvest groundfish catch or catch receipt;

(F) The BSAI reporting area(s) from which each retained species or species group product was caught during the reporting period;

(G) Number of days fished or during which fish were received;

(H) The total estimated catch weight or catch receipt for each BSAI reporting area;

(I) The product type and total product weight produced during the weekly reporting period for each species or species group for which a total allowable catch (TAC) has been specified by the Secretary under § 675.20 of this part;

(J) The amount of each groundfish species or species group discarded during the reporting period, including discard amounts provided to processors under paragraph (b)(2)(iv). Discard amounts should be reported in round weight to the nearest metric ton.

(K) The amount of each prohibited species discarded during the reporting period, including prohibited species discard amounts provided to processors under paragraph (b)(2)(iv). Discard amount of each prohibited species listed under paragraph 675.20(c) must be reported by number, except for herring, which should be reported by round weight (0.1 mt).

(iv) Alaska groundfish processor monthly product value report. Each groundfish processor or its parent company must complete a monthly product value report for any month during which groundfish harvested from any BSAI reporting area were sold. Monthly product value reports must be submitted annually to the Northwest and Alaska Fishery Center, National Marine Fisheries Service, Sand Point Way NE Bldg. 4, Seattle, Washington 98115. The monthly product value reports must be received by NMFS no later than March 1 for the previous fishing year. These reports must include the following information:

(A) Name of the representative for the vessel, plant or company, telephone number, and Fax or telex number;

(B) Name of vessel(s) or plant(s);

(C) Federal permit number or Alaska State processor code, which ever is applicable;

(D) Month and year;

(E) For each species or species group for which product was sold during the month, the product type(s); Product size(s) or grade(s); product weight(s) to the nearest tenth of a metric ton (0.1 mt); and product value(s).

(d) *Domestic Groundfish utilization surveys.*

* * * * *

18. Section 675.7 is amended by adding paragraph (d) as follows:

§ 675.7 General prohibitions.

* * * * *

(d) Fish for groundfish except in compliance with the terms of an observer plan as provided by § 675.25 of this part.

19. In § 675.20, paragraph (a)(2) is revised to read as follows:

§ 675.20 General limitations.

(a) * * *

(2) *Total Allowable Catch (TAC).* The Secretary, after consultation with the North Pacific Fishery Management Council (Council), will specify the annual TAC for each calendar year for each target species and the "other species" category, and will apportion the TACs among DAP, JVP, TALFF, and reserves. TACs in the target species category may be split or combined for purposes of establishing new TACs with apportionments thereof under paragraph (b) of this section. The sum of the TACs so specified must be within the OY range of 1.4–2.0 million mt for target species and the "other species" category.

* * * * *

21. In § 675.22, paragraph (f) is added to read as follows:

§ 675.22 Time and area closures.

* * * * *

(f) No fishing is allowed in that part of the Bering Sea Subarea shoreward of a line on which each point is 12 miles from the base line used to measure the Territorial Sea around islands named Round Island and The Twins as shown on National Oceanic Survey Chart INT 500, and around Cape Peirce (160°10′ W. longitude, 58°40′ N. latitude) during April 1 through September 30 of each of the 1990 and 1991 fishing years.

22. § 675.23 is added as follows:

§ 675.23 Seasons.

Fishing for groundfish during the January 1–December 31 fishing year in the Federal statistical areas defined at § 675.2 of this part is authorized from January 1 through December 31, subject to other provisions of this part.

23. Section 675.24 is added to read as follows:

§ 675.24 Gear Allocations.

Vessels using gear types other than those specified by paragraphs (a) and (b) of this section, must treat sablefish as a prohibited species.

(a) In the Bering Sea Subarea, defined at § 675.2 of this part, hook-and-line and pot gear may be used to take no more than 50 percent of the TAC for sablefish; trawl gear may be used to take no more than 50 percent of the TAC for sablefish.

(b) In the Aleutian Islands Subarea, defined at § 675.2 of this part, hook-and-line and pot gear may be used to take no more than 75 percent of the TAC for sablefish; trawl gear may be used to take no more than 25 percent of the TAC for sablefish.

24. Section 675.25 is added to read as follows:

§ 675.25 Observers.

All fishing vessels subject to this part must comply with terms contained in an observer plan that has been prepared by the Secretary in consultation with the Council for purposes of providing data useful in management of the groundfish fishery, unless specifically exempt from such compliance by the observer plan.

[FR Doc. 89–20445 Filed 8–28–89; 3:28 pm]

BILLING CODE 3510-22-M

Notices

Federal Register
Vol. 54, No. 169
Friday, September 1, 1989

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

Federal Grain Inspection Service

Designation Renewal of the Fostoria (OH) Agency and the States of Louisiana (LA) and North Carolina (NC)

AGENCY: Federal Grain Inspection Service (Service).

ACTION: Notice.

SUMMARY: This notice announces the designation renewal of Robert B. Whitta dba Fostoria Grain Inspection (Fostoria), Louisiana Department of Agriculture and Forestry (Louisiana), and North Carolina Department of Agriculture (North Carolina) as official agencies responsible for providing official services under the U.S. Grain Standards Act, as Amended (Act).

EFFECTIVE DATE: October 1, 1989.

ADDRESS: James. R. Conrad, Chief, Review Branch, Compliance Division, FGIS, USDA, Room 1647 South Building, P.O. Box 96454, Washington, DC 20090–6454.

FOR FURTHER INFORMATION CONTACT: James R. Conrad, telephone (202) 447–8525.

SUPPLEMENTARY INFORMATION: This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12291 and Departmental Regulation 1512–1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

The Service announced that Fostoria's, Louisiana's, and North Carolina's designations terminate on September 30, 1989, and requested applications for official agency designation to provide official services within specified geographic areas in the April 3, 1989, **Federal Register** (54 FR 13394). Applications were to be postmarked by May 3, 1989. Fostoria, Louisiana, and North Carolina were the only applicants for designation in their area, and each applied for designation renewal in the entire area currently assigned to that agency. The Service announced the applicant names in the June 1, 1989, **Federal Register** (54 FR 23498) and requested comments on the applicants for designation. Comments were to be postmarked by July 17, 1989. No comments were received.

The Service evaluated all available information regarding the designation criteria in section 7(f)(1)(A) of the Act; and in accordance with section 7(f)(1)(B), determined that Fostoria, Louisiana, and North Carolina are able to provide official services in the geographic areas for which the Service is renewing their designations. Effective October 1, 1989, and terminating September 30, 1992, Fostoria and North Carolina are designated to provide official inspection functions, and Louisiana is designated to provide official inspection and Class X or Y weighing functions, in their specified geographic areas, as previously described in the April 3 **Federal Register.**

Interested persons may obtain official services by contacting the agencies at the following telephone numbers: Fostoria at (419) 435–3804, Louisiana at (318) 772–0151, and North Carolina at (919) 733–7577.

Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 *et seq.*)

Dated: August 16, 1989.

J.T. Abshier,

Director, Compliance Division.

[FR Doc. 89–20596 Filed 8–31–89; 8:45 am]

BILLING CODE 3410–EN–M

Request for Comments on Designation Applicants in the Geographic Area Currently Assigned to the Alva (OK) and Schaal (IA) Agencies

AGENCY: Federal Grain Inspection Service (Service).

ACTION: Notice.

SUMMARY: This notice requests comments from interested parties on the applicants for official agency designation in the geographic area currently assigned to Thomas Oller dba Alva Grain Inspection Department (Alva) and Lewis D. Schaal dba D.R. Schaal Agency (Schaal).

DATE: Comments must be postmarked on or before October 16, 1989.

ADDRESS: Comments must be submitted in writing to Lewis Lebakken, Jr., RM, FGIS, USDA, Room 0628 South Building, P.O. Box 96454, Washington, DC 20090–6454.

Telemail users may respond to [LLEBAKKEN/FGIS/USDA] telemail.

Telex users may respond as follows:

TO: Lewis Lebakken
TLX: 7607351, ANS: FGIS UC.

All comments received will be made available for public inspection at the above address located at 1400 Independence Avenue, SW., during regular business hours (7 CFR 1.27(b)).

FOR FURTHER INFORMATION CONTACT: Lewis Lebakken, Jr., telephone (202) 475–3428.

SUPPLEMENTARY INFORMATION:

This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12291 and Departmental Regulation 1512–1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

The Service requested applications for official agency designation to provide official services within specified geographic areas in the July 3, 1989, **Federal Register** (54 FR 27907). Applications were to be postmarked by August 2, 1989. Alva and Schaal were the only applicants for designation in those areas, and each applied for the entire area currently assigned to that agency.

This notice provides interested persons the opportunity to present their comments concerning the applicants for designation. Commenters are encouraged to submit reasons for support or objection to this designation action and include pertinent data to support their views and comments. All comments must be submitted to the Resources Management Division, at the above address.

Comments and other available information will be considered in making a final decision. Notice of the final decision will be published in the **Federal Register**, and the applicants will be informed of the decision in writing.

Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 *et seq.*)

Dated: August 16, 1989.

J.T. Abshier,

Director, Compliance Division.

[FR Doc. 89-20597 Filed 8-31-89; 8:45 am]

BILLING CODE 3410-EN-M

Request for Designation Applicants to Provide Official Service in the Geographic Area Currently Assigned to the Columbus (OH) Agency

AGENCY: Federal Grain Inspection Service (Service).

ACTION: Notice.

SUMMARY: Pursuant to the provisions of the U.S. Grain Standards Act, as Amended (Act), official agency designations shall terminate not later than triennially and may be renewed according to the criteria and procedures prescribed in the Act. This notice announces that the designation of an agency will terminate, in accordance with the Act, and requests applications from parties interested in being designated as the official agency to provide official services in the geographic area currently assigned to the specified agency. The official agency is Columbus Grain Inspection, Inc. (Columbus).

DATE: Applications must be postmarked on or before October 2, 1989.

ADDRESS: Applications must be submitted to James R. Conrad, Chief, Review Branch, Compliance Division, FGIS, USDA, Room 1647 South Building, P.O. Box 96454, Washington, DC 20090-6454. All applications received will be made available for public inspection at this address located at 1400 Independence Avenue, SW., during regular business hours.

FOR FURTHER INFORMATION CONTACT: James R. Conrad, telephone (202) 447-8525.

SUPPLEMENTARY INFORMATION: This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12291 and Departmental Regulation 1512-1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

Section 7(f)(1) of the Act specifies that the Administrator of the Service is authorized, upon application by any qualified agency or person, to designate such agency or person to provide official services after a determination is made that the applicant is better able than any other applicant to provide official services in an assigned geographic area.

Columbus, located at 348 E. Franklin, Circleville, OH 43113, was designated under the Act as official agency on March 1, 1987, to provide official inspection functions.

The official agency's designation terminates on February 28, 1990. Section 7(g)(1) of the Act states that designations of official agencies shall terminate not later than triennially and may be renewed according to the criteria and procedures prescribed in the Act.

The geographic area presently assigned to Columbus, in the State of Ohio, pursuant to section 7(f)(2) of the Act, which may be assigned to the applicant selected for designation is as follows:

Bounded on the North by U.S. Route 30 east to State Route 154; State Route 154 east to the Ohio-Pennsylvania State line;

Bounded on the East and South by the Ohio-Pennsylvania State line south to the Ohio River; the Ohio River south-southwest to the western Scioto County line; and

Bounded on the West by the western Scioto County line north to State Route 73; State Route 73 northwest to U.S. Route 22; U.S. Route 22 west to U.S. Route 68; U.S. Route 68 north to Clark County; the northern Clark County line west to State Route 560; State Route 560 north to State Route 296; State Route 296 west to Interstate 75; Interstate 75 north to State Route 47; State Route 47 northeast to U.S. Route 68; U.S. Route 68 north to U.S. Route 30.

Interested parties, including Columbus, are hereby given opportunitiy to apply for official agency designation to provide the official services in the geographic area, as specified above, under the provisions of section 7(f) of the Act and § 800.196(d) of the regulations issued thereunder. Designation in the specified geographic area is for the period beginning March 1, 1990, and ending February 28, 1993. Parties wishing to apply for designation should contact the Review Branch, Compliance Division, at the address listed above for forms and information.

Applications and other available information will be considered in determining which applicant will be designated to provide official services in a geographic area.

Pub. L. 94-582, 90 Stat. 2867, as amended (7 U.S.C. 71 *et seq.*)

Dated: August 16, 1989.

J.T. Abshier,

Director, Compliance Division.

[FR Doc. 89-20598 Filed 8-31-89; 8:45 am]

BILLING CODE 3410-EN-M

Forest Service

Chikamin Timber Sale in the Wenatchee National Forest, Washington

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: Notice is hereby given that the Forest Service will prepare an environmental impact statement (EIS) for the Chikamin timber sale and other related site specific projects, such as, construction of roads and trails, establishment a Spotted Owl Habitat Area (SOHA), and fisheries and watershed improvements in the vicinity of the Chikamin Creek drainage. The drainage is located approximately 40 air miles northwest of Wenatchee, Washington in Chelan County. Part of the proposed timber sale and road construction are within the Rock Creek roadless area. These management activities would be administered by the Lake Wenatchee Ranger District of the Wenatchee National Forest. This EIS will tier to the Chelan Planning Unit, final EIS (1976) which provides the overall guidance for management of the area. Currently, the Final EIS for the Wenatchee National Forest Land and Resource Management Plan (L&RMP) is scheduled for completion in September, 1989. When this plan is complete it will supersede the direction contained in the Chelan Planning Unit. The agency invites written comment and suggestions on this proposed project and related activities and the scope of this analysis. In addition, the agency give notice of the full environmental analysis and decision making process that will occur on this proposed project so that interested and affected people are aware of how they may participate and contribute to the final decision.

DATE: Comments concerning the management and scope of this project analysis must be received by November 1, 1989.

ADDRESS: Submit written comments and suggestions concerning the management of the area to Sonny O'Neal, Forest Supervisor, 301 Yakima Street, Wenatchee, Washington 98801 or George Pozzuto, District Ranger, Lake Wenatchee Ranger District, 22976 State Highway 207, Leavenworth, Washington 98826.

FOR FURTHER INFORMATION CONTACT: Questions about the proposed action and environmental impact statement should be directed to Jim Furlong, Project Team Leader, Lake Wenatchee Ranger District, Wenatchee National

Forest, 22976 State Highway 207, Leavenworth, WA 98826. Phone: (509) 763–3103.

SUPPLEMENTARY INFORMATION: The purpose and goals for the proposed project are to (1) help satisfy short-term demands for timber, and maintain a continuous supply of timber in the future; (2) create a desired future forested condition through the implementation of sound silvicultural management prescriptions; (3) improve the areas trail system to better serve recreational activities such as hiking, horseback riding, off-road vehicle use, snowmobiling, and cross-country skiing; and (4) provide protection to the Northern Spotted Owl by establishment of a SOHA..

The decision to be made is what, if any, timber harvest and other integrated resource projects will be undertaken within the next 2 to 5 years.

Sonny J. O'Neal, Forest Supervisor, Wenatchee National Forest is the responsible official.

The Forest Service also serves notice that the agency is seeking information and comments from Federal, state, and local agencies and other individuals or organizations who may be interested in or affected by the proposed action. This input will be used in preparing the draft EIS. This process will include:

1. Identification of potential issues.
2. Identification of issues to be analyzed in depth.
3. Elimination of insignificant issues or those which have been covered by a relevant previous environmental analysis.
4. Identification of reasonable alternatives.
5. Identification of potential environmental effects of the alternatives.
6. Determination of potential cooperating agencies and task assignments.

A range of alternatives will be considered. One of these will be the "no-action" alternative in which the roadless character of the Rock Creek roadless area would be maintained and timber harvest and associated road building would be deferred. Other alternatives will examine timber harvest and road construction in different locations and varied cutting methods and timber management intensities as well as variable SOHA, trail system, watershed and fisheries improvement project locations to achieve the purpose of the proposed action.

The Forest Service will analyze and document the direct, indirect, and cumulative environmental effects of the alternatives. This will include an analysis of the effects of alternatives on the roadless character of the area affected. In addition, the EIS will disclose the analysis of site specific mitigation measures and their effectiveness.

Public participation will be important during the analysis. People may visit with Forest Service officials at any time during the analysis and prior to the decision.

The draft EIS is expected to be filed with the Environmental Protection Agency (EPA) and to be available for public review by January 1, 1990. At that time EPA will publish a notice of availability of the draft EIS in the **Federal Register.**

The comment period on the draft EIS will be 45 days from the date the Environmental Protection Agency's notice of availability appears in the **Federal Register.**

The Forest Service believes it is important to give reviewers notice at this early stage of several court rulings related to public participation in the environmental review process. First, reviewers of draft environmental impact statements must structure their participation in the environmental review of the proposal so that it is meaningful and alerts an agency to the reviewer's position and contentions. *Vermont Yankee Nuclear Power Corp.* v. *NRDC,* 435 U.S. 519, 553 (1978). Also, environmental objections that could be raised at the draft EIS stage but that are not raised until after completion of the final EIS may be waived or dismissed by the courts. *City of Angoon* v. *Hodel,* 803 F.2d. 1016, 1022 (9th Cir. 1986) and *Wisconsin Heritages, Inc.* v. *Harris,* 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). Because of these court rulings, it is very important that those interested in this proposed action participate by the close of the 45-day comment period so that substantive comments and objections are made available to the Forest Service at a time when it can meaningfully consider them and respond to them in the final EIS.

To assist the Forest Service in identifying and considering issues and concerns on the proposed action, comments on the draft EIS should be as specific as possible. It is also helpful if comments refer to specific pages or chapters of the draft statement. Comments may also address the adequacy of the draft EIS or the merits of the alternatives formulated and discussed in the statement. (Reviewer may wish to refer to the Council on Environmental Quality Regulations for implementing the procedural provisions of the National Environment Policy Act at 40 CFR 1503.3 in addressing these points.).

After the 45 day comment period ends on the draft EIS, the comments will be analyzed and considered by the Forest Service in preparing the final EIS. The final EIS is scheduled to be completed by April 1990. In the final EIS, the Forest Service is required to respond to the comments received (40 CFR 1503.4). The responsible official will consider the comments, responses, environmental consequences discussed in the EIS and applicable laws, regulations, and policies in making a decision regarding this proposal. The responsible official will document the decision and reasons for the decision in the Record of Decision. That decision will be subject to review under 36 CFR Part 217.

Dated: August 23, 1989.

Sonny J. O'Neal,

Forest Supervisor.

[FR Doc. 89–20646 Filed 8–31–89; 8:45 am]

BILLING CODE 3410–11–M

Packers and Stockyards Administrtation

Posted Stockyards; Foister Auction & Sales Co. et al.

Pursuant to the authority delegated under the Packers and Stockyards Act, 1921, as amended (7 U.S.C. 181 *et seq.*), it was ascertained that the lifestock markets named below were stockyards within the definition of that term contained in section 302 of the Act, as amended (7 U.S.C. 202), and notice was given to the owners and to the public by posting notices at the stockyards as required by said section 302, on respective dates specified below.

Facility no., name, and location of stockyard	Date of posting
GA–201 Foister Auction & Sales Co., Baconton, Georgia.	Nov. 7, 1988.
LA–140 Miller Livestock Market-DeRidder Branch, DeRidder, Louisiana.	Nov. 4, 1988.
ME–105 Clark Livestock Sales, Inc., Skowhegan, Maine.	Aug. 25, 1985.
MN–185 Twin Cities Horse Sales, Cannon Falls, Minnesota.	Dec. 16, 1988.
MN–186 Northern Minnesota Cattle Yards, Hines, Minnesota.	Nov. 2, 1988.
PA–152 Kish Valley Dairy Sales, Belleville, Pennsylvania.	Sept. 8, 1986.
TN–185 Apison Livestock Auction Sales, Apison, Tennessee.	Nov. 3, 1988.

Facility no., name, and location of stockyard	Date of posting
WI-140 Great Northern Investments, Fond du Lac, Wisconsin.	June 23, 1988.

Done at Washington, DC this 28th day of August 1989

Harold W. Davis,

Director, Livestock Marketing Division, Packers and Stockyards Administration.

[FR Doc. 89-20657 Filed 8-31-89; 8:45 am]

BILLING CODE 3410-KD-M

Deposting of Stockyards; Decker & Feller Livestock Auction Inc., et al.

It has been ascertained, and notice is hereby given, that the livestock markets named herein, originally posted on the respective dates specified below as being subject to the Packers and Stockyards Act, 1921, as amended (7 U.S.C. 181 *et seq.*), no longer come within the definition of a stockyard under said Act and are, therefore, no longer subject to the provisions of the Act.

Facility No., name and location of stockyard	Date of posting
IL-113 Decker and Feller Livestock Auction, Inc., Cissna Park, Illinois.	Nov. 18, 1959.
IN-144 Producers Marketing Association, Inc., Terre Haute, Indiana.	Apr. 27, 1959.
IA-156 Grinnell Livestock Exchange, Inc., Grinnell, Iowa.	May 20, 1959.
LA-114 DeRidder Livestock Commission Co., DeRidder, Louisiana.	June 11, 1957.
MD-104 Cumberland Stockyards, Inc., Cumberland, Maryland.	Oct. 28, 1959.
MD-115 Baltimore Livestock Exchange, Inc., West Friendship, Maryland.	July 14, 1955.
MT-114 Northern Pacific Stockyards, Missoula, Montana.	Mar. 25, 1941.
NJ-104 Jaeger Livestock Auction Market, Sussex, New Jersey.	Dec. 22, 1959.
NC-107 Brite and Tatum Livestock Company, Inc., Elizabeth City, North Carolina.	May 8, 1961.
NC-158 Howell Stables and Producers Livestock Exchange, Elizabeth, North Carolina.	Nov. 15, 1979.
NC-159 Stegall's Livestock and Auction Barn, Concord, North Carolina.	Apr. 8, 1988.
OH-119 Producers Livestock Association, Findlay, Ohio.	June 1, 1959.
TN-120 Jackson County Commission Company, Gainesboro, Tennessee.	May 11, 1959.
VA-132 Roanoke Livestock Market, Inc., Roanoke, Virginia.	Mar. 11, 1959.
WV-110 Moundsville Livestock Auction Co., Moundsville, West Virginia.	Nov. 6, 1959.

Notice or other public procedure has not preceded promulgation of the foregoing rule. There is no legal justification for not promptly deposting a stockyard which is no longer within the definition of the term contained in the Act.

The foregoing is in the nature of a change relieving a restriction and may be made effective in less than 30 days after publication in the **Federal Register.** This notice shall become effective upon publication in the **Federal Register.**

(42 Stat. 159, as amended and supplemented; 7 U.S.C. 181 *et seq.*).

Done at Washington, DC, this 28th day of August 1989.

Harold W. Davis,

Director, Livestock Marketing Division, Packers and Stockyards Administration.

[FR Doc. 89-20658 Filed 8-31-89; 8:45 am]

BILLING CODE 3410-KD-M

DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

Frequency Management Advisory Council; Open Meeting

AGENCY: National Telecommunications and Information Administration.

ACTION: Notice of Open Meeting, Frequency Management Advisory Council.

SUMMARY: In accordance with the provisions of the Federal Advisory Committee Act, 5 U.S.C. App. 2, notice is hereby given that the Frequency Management Advisory Council (FMAC) will meet from 9:30 a.m. to 4:30 p.m. on September 22, 1989, in Room 1605 at the United States Department of Commerce, 14th Street and Pennsylvania Avenue, NW., Washington DC. (Public entrance to the building is on 14th Street between Pennsylvania Avenue and Constitution Avenue.).

The Council was established on July 19, 1965. The objective of the Council is to advise the Secretary of Commerce on radio frequency spectrum allocation matters and means by which the effectiveness of Federal Government frequency management may be enhanced. The Council consists of 15 members whose knowledge of telecommunications is balanced in the functional areas of manufacturing, analysis and planning, operations, research, academia and international negotiations.

The principal agenda items for the meeting will be:

(1) ITU Plenipotentiary Conference Report

(2) Radio Frequency Radiation Exposure Issues.

(3) Policy Implications for Spectrum Use in the 1990's.

(4) Comprehensive Spectrum Management and Use Policy Review

The meeting will be open to public observations. A period will be set aside for oral comments or questions by the public which do not exceed 10 minutes each per member of the public. More extensive questions or comments should be submitted in writing before September 15, 1989. Other public statements regarding Council affairs may be submitted at any time before or after the meeting. Approximately 20 seats will be available for the public on a first-come, first-served basis.

Copies of the minutes will be available on request 30 days after the meeting.

FOR FURTHER INFORMATION CONTACT: Inquires may be addressed to the Executive Secretary, FMAC, Mr. Michael W. Allen, National Telecommunications and Information Administration, Room 4099, U.S. Department of Commerce, 14th Street and Pennsylvania Avenue, NW., Washington, D.C. 20230, telephone 202-377-0805.

Dated: August 21, 1989.

Michael W. Allen,

Executive Secretary, FMAC, National Telecommunications and Information Administration.

[FR Doc. 89-20630 Filed 8-31-89; 8:45 am]

BILLING CODE 3510-60-M

COMMISSION ON RAILROAD RETIREMENT REFORM

Meeting

Summary: The Commission on Railroad Retirement Reform ("the Commission") will hold a meeting on Tuesday, September 12, 1989. The Commission was established by section 2101 of the Omnibus Budget Reconciliation Act of 1987, Public Law 100-203, enacted December 22, 1987.

Date, Time, and Place: September 12, 1989, 9:30 a.m.-3 p.m., Association of American Railroads, 50 F Street, NW., Washington, DC (4th Floor Conference Center).

Agenda: The opening meeting will include the discussion of railroad

industry employment trends and the review of contract work in the railroad industry.

For Additional Information: Contact Maureen Kiser, 202–254–3223, Commission on Railroad Retirement Reform, 1111 18th Street, NW., Washington, DC 20036.

Supplementary Information: See **Federal Register**, volume 54 FR, No. 40, Thursday, March 2, 1989, Page 8856.

Kenneth J. Zoll,

Executive Director.

[FR Doc. 89–20600 Filed 8–31–89; 8:45 am]

BILLING CODE 6820–63–M

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Establishment and Amendment of Import Limits and Amendment of Group Coverages for Certain Cotton, Wool, Man-Made Fiber, Silk Blend and Other Vegetable Fiber Textile Products Produced or Manufactured in Indonesia

August 23, 1989.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs establishing and amending import limits and amending group coverages.

EFFECTIVE DATE: September 5, 1989.

FOR FURTHER INFORMATION CONTACT: Jennifer Tallarico, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 377–4212. 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) 535–9480. For information on embargoes and quota re-openings, call (202) 377–3715.

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).

During negotiations held August 2–4, 1989 between the Governments of the United States and Indonesia, agreement was reached, effected by a Memorandum of Understanding (MOU) dated August 4, 1989, to amend their current bilateral textile agreement. A formal exchange of notes will follow.

The MOU, among other things, establishes new levels for newly merged Categories 334/335, 336/636 and 351/651. These levels include adjustments for handicraft products, as provided for under the terms of the agreement.

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 53 FR 44937, published on November 7, 1988). Also see 54 FR 27664, published on June 30, 1989.

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 and the Memorandum of Understanding of August 4, 1989, but are designed to assist only in the implementation of certain of their provisions.

Auggie D. Tantillo,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreement

August 28, 1989

Commissioner of Customs, Department of the Treasury, Washington, D.C. 20229.

Dear Mr. Commissioner:

This directive amends, but does not cancel, the directive of June 23, 1989 issued to you 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 Indonesia and exported during the period which began on July 1, 1989 and extends through June 30, 1990.

Effective on September 5, 1989, you are directed to amend the directive of June 23, 1989 to eliminate the current Group I limit. All charges for Group I shall remain at the category levels. Also, you are directed to move Category 336 from Group I to Group II and Categories 627, 628, 629 and 651 from Group II to Group I. All charges made to the limits for Categories 336 in Group I and 651 in Group II shall be charged to the limits for Categories 336/636 in Group II and 351/651 in Group I, respectively. All charges in Group II for Categories 627, 628 and 629 shall be charged to the limit for Categories 625/626/627/628/629 in Group I.

The June 23, 1989 directive is amended further to include new and amended limits for the following categories:

Category	New and Amended Limits [1]
Levels in Group I:	
334/335	126,248 dozen.
351/651	267,681 dozen.
625/626/627/628/629	15,950,000 square meters.
Group II:	
200, 201, 218, 220, 222–227, 229, 237, 239, 300, 301, 330, 332, 333, 338/636, 342/642, 345, 349, 350, 352–354, 359, 360–363, 369–D,[2] 369–O,[3] 400–444 447–469, 600, 603, 604–O [4], 606, 607, 611, 618, 619/620, 621, 622, 624, 630, 631–634, 643, 644, 649, 650, 652–654, 659, 665, 666, 669, 670, 831–836, 838, 839, 840, 842–847, 850–852, 858 and 859, as a group.	65,017,022 square meters equivalent.
Sublevels in Group II:	
336/636	348,783 dozen.
611	3,560,234 square meters.
619/620	4,500,000 square meters.
634	45,154 dozen.
847	231,291 dozen.

[1] The limits have not been adjusted to account for any imports exported after June 30, 1989.

[2] In Category 369–D, only HTS numbers 6302.60.0010, 6302.91.0005 and 6302.91.0045.

[3] In Category 369–O, all HTS numbers except 6302.60.0010, 6302.91.0005 and 6302.91.0045 in Category 369–D; and 6307.10.2005 in Category 369–S.

[4] In Category 604–O, all HTS numbers except 5509.32.0000 in Category 604–A.

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,

Auggie D. Tantillo,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 89–20629 Filed 8–31–89; 8:45 am]

BILLING CODE 3510–DR–M

COMMITTEE FOR PURCHASE FROM THE BLIND AND OTHER SEVERELY HANDICAPPED

Procurement List 1989 Proposed Additions

AGENCY: Committee for Purchase from the Blind and Other Severely Handicapped.

ACTION: Proposed Additions to Procurement List.

SUMMARY: The Committee has received proposals to add to Procurement List 1989 a commodity and a military resale commodity to be produced and services

to be provided by workshops for the blind or other severely handicapped.

COMMENTS MUST BE RECEIVED ON OR BEFORE: October 2, 1989.

ADDRESS: Committee for Purchase from the Blind and Other Severely Handicapped, Crystal Square 5, Suite 1107, 1755 Jefferson Davis Highway, Arlington, Virginia 22202-3509.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703)557-1145.

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 47(a)(2) and 41 CFR 51-2.6. Its purpose is to provide interested persons an opportunity to submit comments on the possible impact of the proposed actions.

If the Committee approves the proposed additions, all entities of the Federal Government will be required to procure the commodity, military resale commodity and services listed below from workshops for the blind or other severely handicapped. It is proposed to add the following commodity, military resale commodity and services to Procurement List 1989, which was published on November 15, 1988 (53 FR 46018):

Commodity

Folder, File 7530-00-990-8884
(Requirements for Belle Mead, New Jersey Supply Facility only)

Military Resale Item No. and Name

No. 929 Mop, Stick, Foam/Nonwoven

Services

Commissary Shelf Stocking and Custodial
Fort Bragg & Malonee Village, Fayetteville, North Carolina

Janitorial/Custodial
Kirkwood U.S. Army Reserve Center, Wilmington, Delaware
New Castle U.S. Army Reserve Center, New Castle, Delaware

Janitorial/Custodial at the following Dallas, Texas locations:
Earle Cabell Federal Building and U.S. Courthouse, 1100 Commerce Street
Federal Building, 1114 Commerce Street
Griffin Street Auto Park, 404 Griffin Street

Packaging of Solicitations
Little Rock District, U.S. Army Corps of Engineers, Little Rock, Arkansas

Beverly L. Milkman,

Executive Director.

[FR Doc. 89-20659 Filed 8-31-89; 8:45 am]

BILLING CODE 6820-33-M

DEPARTMENT OF DEFENSE

Department of the Air Force

Advisory Committee on the Air Force History Program; Meeting

The Advisory Committee on the Air Force History Program will hold a meeting on 27 September 1989 from 8:30 a.m. to 4:00 p.m. and 28 September 1989 from 8:30 a.m. to 12:00 noon at Bolling AFB, DC, Building 5681, Office of Air Force History's Second Floor Conference Room. The purpose of this meeting is to examine the mission, scope, progress, and productivity of the Air Force History Program and to make recommendations thereon for the consideration of the Secretary of the Air Force. The meeting will be open to the public. Topics to be discussed include: organization and personnel, current status of historical projects, and the status of the field history program.

For further information contact Major Michael L. Wolfert, Executive Officer, Office of Air Force History, Bolling AFB, DC 20332-6098, telephone (202) 767-5764.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 89-20631 Filed 8-31-89; 8:45 am]

BILLING CODE 3910-01-M

Intent To Grant Exclusive Patent License to Daychem Laboratories Inc.

Pursuant to the provisions of Part 841.14 of Title 32, Code of Federal Regulations (32 CFR 841, May 17, 1985), the Department of the Air Force announces its intention to grant to Daychem Laboratories, Inc. of Fairborn, Ohio a corporation of the State of Ohio, a royalty bearing exclusive license under United States Patent Application, Serial No. 241-645, entitled "Thermoplastic Aromatic Benzoxazole Polymers and Method of Synthesis," filed September 8, 1988 by Bruce A. Reinhardt.

Any objection thereto, together with a request for an opportunity to be heard, if desired, should be directed in writing to the addressee set forth below within 60 days from the publication of this notice.

All communications concerning this notice should be sent to: Mr. Donald J. Singer, Chief, Patents Division, Office of The Judge Advocate General, HQ USAF/JACP, 1900 Half Street, SW., Washington, DC. 20324-1000, telephone number 202-475-1386.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 89-20632 Filed 8-31-89; 8:45 am]

BILLING CODE 3910-01-M

DEPARTMENT OF EDUCATION

Proposed Information Collection Requests

AGENCY: Department of Education.

ACTION: Notice of proposed information collection requests.

SUMMARY: The Director, Office of Information Resources Management, invites comments on the proposed information collection requests as required by the Paperwork Reduction Act of 1980.

DATE: Interested persons are invited to submit comments on or before October 2, 1989.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Jim Houser, Desk Officer, Department of Education, Office of Management and Budget, 726 Jackson Place NW., Room 3208, New Executive Office Building, Washington, DC 20503. Requests for copies of the proposed information collection requests should be addressed to Margaret B. Webster, Department of Education, 400 Maryalnd Avenue SW., Room 5624, Regional Office Building 3, Washington, DC 20202.

FOR FURTHER INFORMATION CONTACT: Margaret B. Webster (202) 732-3915.

SUPPLEMENTARY INFORMATION: Section 3517 of the Paperwork Reduction Act of 1980 (44 U.S.C. Chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations.

The Director, Office of Information Resources Management, publishes this notice containing proposed information collection requests prior to submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following:

(1) Type of review requested, e.g., new, revision, extension, existing or reinstatement; (2) title; (3) Frequency of collection; (4) The affected public; (5) Reporting burden; and/or (6) Recordkeeping burden; and (7) Abstract. OMB invites public comment at the address specified above. Copies of the

requests are available from Margaret Webster at the address specified above.

Dated: August 28, 1989.

George Sotos,

Acting Director, for Office of Information Resources Management.

Office of Planning, Budget, and Evaluation

Type of Review: New.
Title: Design for a Study of Chapter 1 Services in Secondary Schools.
Frequency: One time.
Affected Public: State or local governments.
Reporting Burden:
Responses: 240. Burden Hours: 160.
Recordkeeping Burden:
Recordkeepers: 0. Burden Hours: 0.
Abstract: The purpose of this study is to provide the Department with detailed information of chapter 1 programs in secondary schools and to examine existing dropout rates or prevention programs that might serve as models for administering chapter 1 services.

Office of Planning, Budget, and Evaluation

Type of Review: New.
Title: Study of Programs for Retaining the Benefits of Early Childhood Education for Disadvantaged Children.
Frequency: One time.
Affected Public: State or local governments.
Reporting Burden:
Responses: 2,404. Burden Hours: 1,491.
Recordkeeping Burden:
Recordkeepers: 0. Burden Hours: 0.
Abstract: The purpose of this study is to determine the extent of transition programs designed to improve the school performance of disadvantaged children. Data will identify and describe transition programs in public schools and develop criteria for exemplary programs.
Type of Review: New.
Title: Study of Drug-Free Schools and Community Act.
Frequency: One time.
Affected Public: Individuals or households; State or local governments; businesses or other for-profit; Non-profit institutions; Small businesses or organizations.
Reporting Burden:
Responses: 2842.
Burden Hours: 2899.
Recordkeeping Burden:
Recordkeepers: 0.
Burden Hours: 0.
Abstract: This study will collect information about State, school district, and community practices in planning, administering, implementing, and evaluating State and local programs funded under the Drug-Free Schools and Communities Act, as amended. The Department will use this information to assess the accomplishments of project goals and objectives and to aid in effective program management.
Type of Review: New.
Title: State Survey of Chapter 1 Programs.
Frequency: One time.
Affected Public: State or local governments.
Reporting Burden:
Responses: 53.
Burden Hours: 106.0.
Recordkeeping Burden:
Recordkeepers: 0.
Burden Hours: 0.
Abstract: The purpose of this survey is to provide the Department with detailed information on state implementation of Chapter 1 provisions. The Department will use this information to determine how states and school districts are responding to the new provisions and identify states which have taken exemplary or innovative actions.

Office of Bilingual Education and Minority Languages Affairs

Type of Review: Extension.
Title: Application for Grants Under the Transition Program for Refugee Children.
Frequency: Annually.
Affected Public: State or local governments.
Reporting Burden:
Responses: 52.
Burden Hours: 7,644.
Recordkeeping Burden:
Recordkeepers: 0.
Burden Hours: 0.
Abstract: This application will be used by State educational agencies to apply for grants under the Transitional Program for Refugee Children. The Department uses the data collected to determine the amount of the grant award based on the number of eligible refugee children enrolled in a States's public and private elementary and secondary schools.

Office of Educational Research and Improvement

Type of Review: New.
Title: National Program for Mathematics and Science Education.
Frequency: Annually.
Affected Public: State or local governments; Non-profit institutions.
Reporting Burden:
Responses: 200.
Burden Hours: 4,800.
Recordkeeping Burden:
Recordkeepers: 0.
Burden Hours: 0.
Abstract: This form will be used by State agencies to apply for funding under the National Program for Mathematics and Science. The Department uses the information to make grant awards.

Office of Postsecondary Education

Type of Review: Extension.
Title: Application for the Drug Prevention Program of the Fund for the Improvement of Postsecondary Education.
Frequency: Annually.
Affected Public: Institutions of higher education; Non-profit organizations.
Reporting Burden:
Responses: 800.
Burden Hours: 12,800.
Recordkeeping Burden:
Recordkeepers: 0.
Burden Hours: 0.
Abstract: This form will be used by institutions of higher education and non-profit organizations to apply for funding under the Drug Prevention Program. The Department uses the information to make grant awards.

[FR Doc. 89-20583 Filed 8-31-89; 8:45 am]
BILLING CODE 4000-01-M

National Assessment Governing Board; Meeting

AGENCY: National Assessment Governing Board.

ACTION: Notice of partially closed meeting.

SUMMARY: This notice sets forth the schedule and proposed agenda of a forthcoming meeting of the National Assessment Governing Board. This notice also describes the functions of the Board. Notice of this meeting is required under section 10(a)(2) of the Federal Advisory Committee Act. This document is intended to notify the general public of their opportunity to attend.

DATES: September 15 and 16, 1989.

TIME: September 15: 9:00 A.M.–12:15 A.M.; 12:15–1:15 P.M., closed; 1:15 P.M.-Adjournment, open. September 16: 8:30 A.M.–3:30 P.M., open.

ADDRESS: Hyatt Regency Hotel [on Capitol Hill], 400 New Jersey Avenue NW., Washington, DC 20001.

FOR FURTHER INFORMATION CONTACT: Roy Truby, National Assessment Governing Board, U.S. Department of Education, Mary E. Switzer Building, Room 4060, Washington, DC 20202–7583, Telephone: (202) 732–1824.

SUPPLEMENTARY INFORMATION: The National Assessment Governing Board

is established under section 406(i) of the General Education Provisions Act (GEPA) as amended by section 3403 of the National Assessment of Educational Progress Act (NAEP Improvement Act), title III–C of the Augustus F. Hawkins—Robert T. Stafford Elementary and Secondary School Improvement Amendments of 21988 (Pub. L. 100297); (20 U.S.C. 1221e–1).

The Board is established to advise the Commissioner of the National Center for Education Statistics on policies and actions needed to improve the form and use of the National Assessment of Education Progress, and develop specifications for the design, methodology, analysis and reporting of test results. The Board also is responsible for selecting subject areas to be assessed, identifying the objectives for each age and grade tested, and establishing standards and procedures for interstate and national comparisons.

The National Assessment Governing Board will meet in Washington, DC on September 15 and 16, 1989. The Board will meet from 9:00 A.M. until completion of business on September 15, 1989 and from 8:30 A.M. to 3:30 P.M. on September 16, 1989.

The proposed agenda of the open portion of the meeting includes reports by subcommittees on writing, analysis, and reporting and dissemination. There will also be a discussion of the pros and cons of state by state comparisons, a progress report on goal setting, discussion on reading issues related to public hearings and consensus solicitations, an update of the National Assessment of Educational Progress program including a review of the current contract, a review of the role of the National Governor's Association in goal setting, and a working dinner discussing the Board's role in the Department. On September 16, the open portion will be a continuation of the subcommittee reports.

On September 15, 1989, from 12:15 P.M. to 1:15 P.M., a portion of the meeting will be closed to the public. The closed portion of the meeting will be closed under the authority of 10(d) of the Federal Advisory Committee Act (5 U.S.C. App. 2) and under exemption 9(B) of the Government in the Sunshine Act (5 U.S.C. 552b(c). During the closed portion of the meeting, there will be review of a grantee's draft trend report prior to its formal release by the Department. The draft report is still undergoing technical review and analysis and there is a significant possibility that the data may be incorrect or incomplete. Disclosure of this information is likely to disclose information, the premature disclosure of which would likely to significantly frustrate implementation of proposed agency action. Such matters are protected by 5 U.S.C. 552b(c)(9)(B).

A summary of the activities at the closed session and related matters which are informative to the public consistent with the policy of title 5 U.S.C. 522b will be available to the public within fourteen days of the meeting. Records are kept of all Board proceedings, and are available for public inspection at the U.S. Department of Education, National Assessment Governing Board, Mary E. Switzer Building, 330 C Street SW., Room 4060, Washington, DC 20202–7583 from 8:30 A.M. to 5:00 P.M., Monday through Friday.

Dated: August 29, 1989.

Bruno V. Manno,

Acting Assistant Secretary for Educational Research and Improvement.

[FR Doc. 89–20682 Filed 8–31–89; 8:45 am]

BILLING CODE 4000–01–M

National Assessment Governing Board; Meeting

AGENCY: National Assessment Governing Board.

ACTION: Notice of open meeting.

SUMMARY: The National Assessment Governing Board, U.S. Department of Education, is announcing four public hearings. These hearings will be held as part of the Board's consensus-building process which will lead to specific recommendations for the reading assessment goals for the 1992 National Assessment of Educational Progress. The hearings will provide interested individuals and organizations with the opportunity to present oral and/or written views to the Board. The hearings will focus on goal statements for grades 4, 8, and 12, the model grades for these ages. These hearings are being conducted pursuant to Public Law 100–297, section 6(E) which states that "Each learning area assessment shall have goal statements devised through a national consensus approach, providing for active participation of teachers, curriculum specialists, local school administrators, parents and concerned members of the general public." The results of these hearings are particularly important because they will form the framework of the assessment for both the national sample (at all age/grade levels), and the state representative sample (at grade 4 only).

DATES: The dates of the four public hearings are as follows:

September 27, 1989: Dallas, Texas

October 11, 1989: Trenton, New Jersey

October 26, 1989: Los Angeles, California

November 3, 1989: Atlanta, Georgia

The hearings will begin at 12:00 Noon and adjourn at 8:00 P.M. There will be a 15-minute recess from 4:00 to 4:15. If necessary it may be possible to extend the ending time beyond 8:00 P.M. Persons desiring to present oral statements at the hearing shall submit a notice of intent to appear, postmarked no fewer than fourteen (14) days prior to the scheduled meeting date. Scheduling of oral presentations cannot be guaranteed for notices of intent to appear that are not received on time.

Notices of intent to present oral statements shall be mailed to: National Assessment Governing Board, Mary E. Switzer Building, Suite 4060, 330 C Street, SW., Washington, DC 20202–7583, Attention: Public Hearings.

ADDRESSES: The locations of the four public hearings are as follows:

Dallas: Richland College Campus, Performance Hall, Dallas, Texas

Trenton: Trenton Board of Education, Board Room, 108 North Clinton Avenue, Trenton, New Jersey 08609

Los Angeles: Los Angeles County Board of Education, County Office Room, 9300 East Imperial Highway, Downey, California 90242–2890

Atlanta: Southern Regional Education Board, Georgia Tech Campus, 592 Tenth Street, NW., Atlanta, Georgia 30318–5790

Written Statements: Written statements may be submitted for the public record in lieu of oral testimony through November 3, 1989. These statements should be sent directly to the Board (see address given above) in the following format:

I. Issues and Questions Addressed

Identify the issue(s) and question(s) to which the testimony is directed. For example, "age 9/grade 4 reading goals,"or "state curriculum in reading."

II. Summary

Briefly summarize the major points and recommendations presented in the testimony.

III. Discussion

The narrative should provide information, points of view, and recommendations that will enable the Board to consider all factors relevant to the question(s) the testimony addresses.

Respondents are encouraged to limit this section of their written statements to five (5) pages. The discussion may be

appended with documents of any length providing further explanation.

Written statements presented at the hearings will be accepted and incorporated into the public record. All written statements should follow the above format, as far as this is possible.

Hearings, objectives, and procedures

The Board seeks participation in the hearings from a wide spectrum of individuals and organizations. Speakers will be scheduled, to the extent feasible, to provide a broad but balanced number of viewpoints and to reflect a variety of interests.

The goal of the hearing is to provide for maximum input and guidance from teachers, curriculum specialists, local school administrators, parents and concerned members of the general public. Accordingly, the hearings will include a very brief introduction by National Assessment Governing Board members, with the great majority of each day devoted to presentations by scheduled speakers.

As listed in the **DATES** and **ADDRESSES** sections above, speakers wishing to present statements shall file notices of intent. To assist the Board in appropriately scheduling speakers, the written notice of intent to present oral testimony should include the following information:

(1) Name, address, and telephone number of each person to appear;

(2) Affiliation (if any);

(3) A brief statement of the issues and/or concerns that will be addressed; and

(4) whether a written statement will be submitted for the record.

Individuals who do not register in advance will be permitted to register and speak at the meeting in order of registration, if time permits. Speakers should plan to limit their total remarks to no more than 5 minutes. While it is anticipated that all persons desiring to do so will have an opportunity to speak, time limits may not allow this to occur. The Board will make the final determination on selection and scheduling of speakers.

However, all written statements presented at the hearings will be accepted and incorporated into the public record. Written statements submitted in lieu of oral testimony should be received by November 3, 1989 in order to be incorporated into the public record. Written statements received after that date will be accepted; however, inclusion in the public record cannot be guaranteed.

A member of the Board will preside at each of the four hearings. The proceedings will be audiotaped. The hearings will also be signed for the hearing-impaired, and a bilingual speaker (Spanish-English) will be available on site.

Additional information

Individuals wishing more information on a specific hearing should contact either the Board offices in Washington, DC, at (202) 732–7885, or one of the following contact persons at the nearest Regional offices:

For Dallas, contact Ms. Clydene Thomas, (214) 767–3626

For Trenton, contact Mike Hatam, (212) 264–7006

For Los Angeles, contact Ms. Pearlie Herbert, (415) 556–4571

For Atlanta, contact Ms. Frances Hyatt, (404) 331–0550

Next steps

The Board plans to analyze all comments received in response to this announcement. A report of the public outcomes of these public hearings will be available to the public upon request after January 1, 1990.

The results of the public comments will be used by the National Assessment Governing Board, in conjunction with all other solicited written testimony, and formal consensus-building activities, to establish the goal statements and test specifications for the 1992 reading assessment of the National Assessment of Educational Progress.

Records are kept of all Board proceedings, and are available for public inspection at U.S. Department of Education, National Assessment Governing Board, Mary E. Switzer Building, 330 C Street, SW., Room 4060, Washington, DC 20202–7583, from 8:30 a.m. to 5:00 p.m., Monday through Friday.

Date: August 29, 1989.

Bruno V. Manno,

Acting Assistant Secretary for Educational Research and Improvement.

[FR Doc. 89–20683 Filed 8–31–89; 8:45 am]

BILLING CODE 4000–01–M

DEPARTMENT OF ENERGY

Office of the Secretary

Solicitation of Comments From the General Public on the Environmental Restoration and Waste Management Five-Year Plan

AGENCY: Office of the Secretary, DOE.

ACTION: Notice of availability of the Environmental Restoration and Waste Management Five-Year Plan for the general public review and comment.

SUMMARY: As stated publicly on numerous occasions, and as testified to before the Congress, the Department of Energy has been preparing the Environmental Restoration and Waste Management Five-Year Plan to establish a departmentwide agenda for environmental cleanup and compliance against which overall progress can be measured. The Five-Year Plan has now been completed. The Plan encompasses three discrete compliance-related activity areas: Corrective Activities, Environmental Restoration, and Waste Management Operations, and includes budget projections through fiscal year 1995. The Department is making available for interested groups and individuals the Environmental Restoration and Waste Management Five-Year Plan for review and comment. The comment period will be approximately 90 days beginning on (date of publication) and extending through November 30, 1989. All comments will be considered in the preparation of the updated plan (1992–1996) which will be available for review and comment in May 1990.

DATE: Comments will be accepted through November 30, 1989.

ADDRESSES: Persons requiring copies of the Plan should submit their requests to Mr. R.P. Whitfield, Office of Defense Waste and Transportation Management, DP–12, Attn: Five-Year Plan, Department of Energy, Washington, DC 20545 or call (301) 353–3555. Written comments should be addressed to Mr. Whitfield at the same address.

FOR FURTHER INFORMATION CONTACT: Mr. R.P. Whitfield on (303) 353–3555.

Leo P. Duffy,

Special Assistant to the Secretary of Coordination of DOE Waste Management.

[FR Doc. 89–20672 Filed 8–31–89; 8:45 am]

BILLING CODE 6450–01–M

Office of Fossil Energy

[Docket No. PP–85A]

Application by Westmin Resources, Inc. for Re-issuance of Presidential Permit PP–85 to Westmin Mines, Inc.

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of application by Westmin Resources, Inc. for re-issuance of Presidential Permit PP–85 to Westmin Mines, Inc.

SUMMARY: Westmin Resources, Limited (Westmin), on behalf of its wholly-owned subsidiary Westmin Resources, Inc. (WRI), has applied to the Office of Fossil Energy (FE) of the Department of

Energy (DOE) for the re-issuance of Presidential Permit PP–85 to Westmin Mines, Inc. (WMI), a new U.S. corporation, which is indirectly controlled by Westmin. Presidential Permit PP–85 authorizes WRI to construct, connect, operate and maintain a 35-kilovolt electric transmission line at the international border between the U.S. and Canada. The purpose of the transmission line and the conditions imposed upon WRI by the permit will not be affected by the re-issuance of the permit.

FOR FURTHER INFORMATION CONTACT:

Anthony J. Como, Office of Fuels Programs, (FE–52), Office of Fossil Energy, Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–5935.

Lise Courtney M. Howe, Office of General Counsel, (GC–41), Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–2900.

SUPPLEMENTARY INFORMATION: On July 17, 1987, Westmin, a Canadian corporation, applied to the DOE, under Executive Order 10485, as amended, for a Presidential permit to construct a 35-kilovolt transmission line which would cross the U.S. international border from British Columbia, Canada, pass through the State of Alaska, and re-enter British Columbia at a second point on the U.S. international border. This application is contained in Docket No. PP–85. Westmin proposed to use the facilities to transmit electric energy from an existing powerplant located in Stewart, British Columbia, to a mine developed by Westmin in British Columbia, about 10 miles north of Hyder, Alaska. The transmission facilities would not connect with any existing U.S. transmission lines and no electric energy would flow to or from any U.S. electric utility as a result of this project.

Subsequent to filing the application, Westmin requested that, if a Presidential permit were granted, it be issued to Westmin Resources, Inc., Westmin's wholly-owned subsidiary incorporated in Colorado. On October 5, 1988, Presidential Permit PP–85 was issued to WRI.

On July 19, 1989, Westmin applied to the Office of Fuels Programs to have Presidential Permit PP–85 re-issued in the name of Westmin Mines, Inc. WMI is a newly formed Idaho corporation and a wholly-owned subsidiary of Westmin. Westmin has established WMI and has requested re-issuance of the permit to WMI in order to facilitate a reorganization of the Westmin group of companies. Westmin is prohibited by Article 9 of the permit from transferring the Presidential permit to another entity, except in the event of involuntary transfer of the facilities by the operation law. Accordingly, Westmin is applying for the re-issuance of the permit to WMI.

Any person desiring to be heard or to protest this application to re-issue Presidential Permit PP–85 should file a petition to intervene or protest with the Office of Fuels Programs, Room 3H–087, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585, in accordance with § 385.211 or § 385.214 of the Rules of Practice and Procedure (18 CFR 385.211, 385.214).

Any such petitions and protests should be filed on or before (30 days after publication of this notice). An additional copy of such petitions to intervene or protests also should be filed with:

Raymond O. Hampton, Corporate Secretary, Westmin Mines, Inc., 904–1055 Dunsmuir Street, P.O. Box 49066, The Bentall Centre, Vancouver, British Columbia, Canada V7X 1C4, (604) 681–2253.

Stephen D. Wortley, Lang, Michener, Lawrence & Shaw, 2500–595 Burrard Street, P.O. Box 49200, Vancouver, British Columbia, Canada V7X 1L1, (604) 689–9111.

Protests and comments will be considered by the DOE under 18 CFR 385.211 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 petition to intervene under 18 CFR 385.214. Section 385.214 requires that a petition to intervene must state, to the extent known, the position taken by the petitioner and the petitioner's interest in sufficient factual detail to demonstrate either that the petitioner has a right to participate because it is a State Commission; that it has or represents an interest which may be directly affected by the outcome of the proceeding, including any interest as a consumer, customer, competitor, or security holder of a party to the proceeding; or that the petitioner's participation is in the public interest.

Copies of this application will be made available, upon request, for public inspection and copying at the DOE's Freedom of Information Room, Room 1E–190, Forrestal Building, 1000 Independence Avenue SW., Washington, DC from 9:00 a.m. to 4:00 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, DC, on August 28, 1989.

Constance L. Buckley,

Deputy Assistant Secretary for Fuels Programs, Office of Fossil Energy.

[FR Doc. 89–20673 Filed 8–31–89; 8:45 am]

BILLING CODE 6450–01–M

Office of Energy Research

Special Research Grant Program Notice 89–8: Health Effects Research

AGENCY: Department of Energy, (DOE).

ACTION: Notice inviting grant applications.

SUMMARY: The Office of Health and Environmental Research (OHER) of the Office of Energy Research (OER), U.S. Department of Energy (DOE) announces its interest in receiving applications for Special Research Grants in support of the Human Genome Initiative. This initiative is a coordinated multidisciplinary research effort aimed at developing creative, innovative resources and technologies which will lead to a detailed understanding of the human genome at the molecular level. Several research goals are encompassed in this Notice: (1) Research will be supported to develop technologies and resources necessary for the physical mapping of human chromosomes, i.e., establishing the original linear order of DNA fragments. This includes development of improved automated systems for analysis of DNA fragments and clones, and better means of obtaining DNA as purified chromosomes or chromosome fragments; (2) Research will be supported for the development of innovative and cost-effective technologies leading to rapid and accurate large scale DNA sequencing. This includes non-gel techniques and direct imaging approaches; (3) Research will be supported to develop data management systems, data structures, retrieval schemes, user interfaces and advanced database theory to support DNA mapping and sequencing. Also desired are improved algorithms and hardware for analyzing DNA sequences, including identification of homologies, regulatory sites, and protein coding regions.

DATES: To permit timely consideration for award in Fiscal Year 1990, formal applications submitted in response to this Notice should be received by the Division of Acquisition and Assistance Management by December 15, 1989.

ADDRESS: Formal applications referencing Program Notice 89–8 should be forwarded to: U.S. Department of

Energy, Office of Energy Research, Division of Acquisition and Assistance Management, ER–64, Room G–236, Washington, DC 20545, ATTN: Program Notice 89–8.

PREAPPLICATIONS AND FURTHER INFORMATION: Before preparing a formal application, potential applicants should submit a brief preapplication in accordance with 10 CFR 600.10(d)(2) which consists of two to three pages of narrative describing research objectives. These will be reviewed relative to the scope and the research needs of the DOE human genome program. Preapplications are due on September 22, 1989, and should be sent to the following address: Dr. Benjamin J. Barnhart, Office of Health and Environmental Research, ER–72 (GTN), Washington, DC 20545, (301) 353–5037. A response which is based on these preapplications and which discusses the potential program relevance of a formal application will be communicated by October 6, 1989. Telephone and telefax numbers are requested.

SUPPLEMENTARY INFORMATION: It is anticipated that approximately $2M will be available for grant awards during FY 1990. Based on past experience, this year funding of awards is expected, subject to the availability of future funds. Information about development and submission of applications, eligibility, limitations, evaluation and selection processes, and other policies and procedures may be found at 10 CFR part 605. The Office of Energy Research (ER), as part of its grant regulations, requires at 10 CFR 605.11(b) that any grantee funded by ER and performing research that involves recombinant DNA molecules and/or organisms and viruses containing recombinant DNA molecules shall comply with the National Institutes of Health "Guidelines for Research Involving Recombinant DNA Molecules; May 7, 1986" (51 FR 16957, May 7, 1986). Application kits and copies of 10 CFR part 605 are available from the U.S. Department of Energy, Division of Acquisition and Assistance Management (see above address). Telephone requests may be made by calling (301) 353–5037. Instructions for preparation of an application are included in the application kit. The Catalog of Federal Domestic Assistance number for this program is 81.049.

Issued in Washington, DC on August 23, 1989.

D. D. Mayhew,

Deputy Director for Management, Office of Energy Research.

[FR Doc. 89–20674 Filed 8–31–89; 8:45 am]

BILLING CODE 6450–01–M

Federal Energy Regulatory Commission

[Docket Nos. ER89–613–000, et al.]

Kansas City Power & Light Company, et al.; Electric rate, Small power production, and Interlocking Directorate filings

Take notice that the following filings have been made with the Commission:

1. Kansas City Power & Light Company

[Docket No. ER89–613–000]

August 22, 1989.

Take notice that on August 18, 1989, Kansas City Power & Light Company (KCPL) tendered for filing an Amendatory Agreement No. 1 to Municipal Participation Agreement, between KCPL and the City of Osawatomie, Kansas dated July 13, 1989. KCPL states that the Amendatory Agreement provides for an extension of the contract term and a modified rate design for firm power service.

KCPL requests an effective date of August 1, 1989, and therefore requests waiver of the Commission's notice requirements.

Comment date: September 5, 1989, in accordance with Standard Paragraph E at the end of this notice.

2. New England Power Company Boston Edison Company

[Docket No. ER89–612–000]

August 22, 1989.

Take notice that on August 18, 1989, New England Power Company (NEP) and Boston Edison Company (BECO) submitted for filing amendments to the AC Facilities Support Agreements among the two companies and the participants in Phase II of the New England Power Pool/Hydro-Quebec interconnection. NEP and BECO state that these amendments provide for the initial rate of return on equity, 14% and 13.75% respectively, to be included in the support calculations under these Agreements.

According to the companies, the AC transmission facilities are estimated to be in-service by November 1, 1989. The companies request that the proposed amendments be made effective October 16, 1989 but that billing be deferred until commercial operation of the facilities.

Comment date: September 5, 1989, in accordance with Standard Paragraph E at the end of this notice.

3. Central Illinois Public Service Company

[Docket No. ER89–614–000

August 22, 1989.

Take notice that on August 18, 1989, Central Illinois Public Service Company (CIPS) tendered for filing a new Interconnection Agreement dated July 1, 1989, between CIPS and Indiana Municipal Power Agency (IMPA).

The new Interconnection Agreement provides for coordinated interconnection operation including the interchange of Power and Energy under Service Schedule A, Seasonal Power, Service Schedule B, Short Term Power, Service Schedule C, Maintenance Power, Service Schedule D, Emergency Energy, Service Schedule E, Interchange Energy, and Service Schedule F, Term Energy.

Copies of this filing have been sent to Indiana Municipal Power Agency, Inc. and the Illinois Commerce Commission.

Comment date: September 5, 1989, in accordance with Standard Paragraph E end of this notice.

4. Gulf Power Company

[Docket No. ER89–619–000]

August 24, 1989.

Take notice that on August 21, 1989, Gulf Power Company filed a revised sheet to its FERC Electric Tariff which would allow the Company to recover the costs associated with the buy-out of long term fuel supply agreements through the fuel cost adjustment clause. This clause is applicable to the sale of electric energy to Gulf's territorial wholesale customers. Gulf has requested, pursuant to § 385.207 of FERC regulations, a waiver of and/or deviation from the provisions of § 35.14, including but not restricted to paragraphs (a)(6) and (a)(9) of that section, as provided for by paragraph (10) of § 35.14. This waiver, if granted, would allow the tariff revision as proposed by Gulf and would continue to result in lower fuel adjustment charges to its wholesale customers. This tariff revision is proposed to become effective on January 1, 1987; and Gulf has requested waiver of the Commission's notice requirements in order to allow such an effective date.

Gulf's wholesale customers have been furnished with a copy of the proposed tariff revisions and each of the affected wholesale customers has consented to the proposed tariff change by executing letters of consent.

Comment date: September 7, 1989, in accordance with Standard Paragraph E end of this notice.

5. Washington Water Power Company

[Docket No. ER89-615-000]

August 24, 1989.

Take notice that on August 8, 1989, Washington Water Power Company (WWP) submitted for filing its annual rate revision under WWP's 15-year agreement with Puget Sound Power & Light Company. WWP requests waiver of the Commission's notice requirements in order to permit an effective date of April 1, 1989.

Comment date: September 7, 1989, in accordance with Standard Paragraph E at the end of this notice.

6. Arizona Public Service Company

[Docket No. ER89-616-000]

August 24, 1989.

Take notice that on August 14, 1989, Arizona Public Service Company ("APS" or "Company") tendered for filing amendments affecting estimated contract demands or maximum demands in the following FPC/FERC Electric Service Rate Schedules:

FPC/FERC No.	Customer	Revised exhibit
58	Wellton-Mohawk	Exhibit B.
59	APA	Exhibit B.
65	CRIIP	Exhibit A.
66	SCIIP	Exhibit A.
74	Wickenburg	Exhibit B.
120	Southern California Edison.	Exhibit B.
126	ED-6	Exhibit "II".
128	ED-7	Exhibit "II".
140	ED-8	Exhibit "II".
141	AID	Exhibit "II".
142	McMullen Valley	Exhibit "II".
143	Tonopah	Exhibit "II".
149	Citizens Utility Company.	Exhibit B.
153	Harquahala	Exhibit "II".
155	Buckeye	Exhibit "II".
158	Roosevelt	Exhibit "II".
161	PTUA	Exhibit B.
170	Wickenburg	Exhibit A.

No changes from the currently effective Wholesale Power or Transmission ("Wheeling") rate levels are proposed herein. No new facilities are required to provide these services.

A copy of this filing has been served on the above customers, the California Public Utilities Commission and the Arizona Corporation Commission.

Comment date: September 7, 1989, in accordance with Standard Paragraph E at the end of this notice.

7. Georgia Power Company

[Docket No. ER89-618-000]

August 24, 1989.

Take notice that on August 22, 1989, Georgia Power Company ("Georgia Power") tendered for filing a Coordination Services Agreement (the "Agreement") dated as of August 21, 1989, between Georgia Power and Oglethorpe Power Corporation (An Electric Membership Generation & Transmission Corporation) ("OPC").

Georgia Power states that the Agreement has been executed to facilitate a power purchase by OPC from Big Rivers Corporation. Georgia Power seeks waiver of the Commission's notice requirements and seeks an effective date of August 21, 1989. The Agreement will terminate on May 31, 1992.

Comment date: September 7, 1989, in accordance with Standard Paragraph E at the end of this notice.

8. The Washington Water Power Company

[Docket No. ER89-617-000]

August 24, 1989.

Take notice that on August 21, 1989, The Washington Water Company (Washington) tendered for filing its revised Index of Purchasers under Washington's FERC Electric Tariff Original Volume No. 3 (Tariff 3). The revision incorporates the addition of new nonfirm Service Agreements with Arizona Public Service; British Columbia Power Export Corporation; Chelan County Public Utility District #1; Cowlitz County Public Utility District; Deseret Generation & Transmission Co-operative; Eugene Water & Electric Board; Grant County Public Utility District #2; Nevada Power Company; Pend Oreille County Public Utility District #1; Public Service Company of New Mexico; Salt River Project; City of Santa Clara; Utah Municipal Power Systems; Western Area Power Administration; and West Kootenay Power, Limited.

WWP requests that the effective date as indicated on the Index of Purchasers be assigned by the Commission.

Washington states that copies of the filing have been sent to parties to Washington's Tariff 3 Service Agreements.

Comment date: September 7, 1989, in accordance with Standard Paragraph E at the end of this notice.

9. Wisconsin Power and Light Company

[Docket No. EL89-48-000]

August 24, 1989.

Take notice that on August 22, 1989, Wisconsin Power and Light Company (WPL), in accordance with § 385.207 of the Commission's Regulations, filed a petition for a declaratory order on the propriety of recording coal reserve payments in Account 501 and recovering those costs through its fuel adjustment clause. WPL states that its fuel costs include payments made to a coal supplier under a coal reserve provision of a coal supply contract. WPL believes that these amounts are properly recordable in Account 501 and therefore properly recoverable through the fuel adjustment clause. In the event that the Commission finds WPL's proposal improper, WPL requests a waiver of the Commission's fuel clause regulations in accordance with §§ 35.14(a)(10) and 385.207. WPL requests an effective date of August 1, 1989.

Comment date: September 14, 1989, 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. 89-20585 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket Nos. CP89-1971-000, et al.]

Trunkline Gas Company, et al.; Natural Gas Certificate Filings

Take notice that the following filings have been made with the Commission:

1. Trunkline Gas Company

[Docket No. CP89-1971-000]

August 21, 1989.

Take notice that on August 18, 1989, Trunkline Gas Company (Trunkline), P.O. Box 1642, Houston, Texas 77251-1642, filed in Docket No. CP89-1971-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide an interruptible transportation service for Natural Gas Clearinghouse, Inc. (NGC), a marketer, under the blanket certificate issued in Docket No. CP86-586-000, pursuant to

Section 7 of the Natural Gas Act, all as more fully set forth in the request that is on file with the Commission and open to public inspection.

Trunkline states that pursuant to a transportation agreement dated June 1, 1989, under its Rate Schedule PT, it proposes to transport up to 50,000 dekatherms (dt) per day equivalent of natural gas for NGC. Trunkline states that it would transport the gas received from Anadarko at East Cameron 359, offshore Louisiana, and Mesa at Vermillion Block 348, offshore Louisiana, as shown in Exhibit "A" of the transportation agreement, and would deliver the gas, less fuel and unaccounted for line loss, to Stingray Subsea at East Cameron 338, offshore Louisiana, and Panhandle Subsea at Vermilion Block 340, offshore Louisiana.

Trunkline advises that service under § 284.223(a) commenced June 1, 1989, as reported in Docket No. ST89–4460–000. Trunkline further advises that it would transport 5,000 dt on an average day and 1,825,000 dt annually.

Comment date: October 5, 1989, in accordance with Standard Paragraph G at the end of this notice.

2. Panhandle Eastern Pipe Line

[Docket No. CP89–1975–000]

August 22, 1989.

Take notice that on August 21, 1989, Panhandle Eastern Pipe Line Company (Panhandle), P.O. Box 1642, Houston, Texas 77251–1642, filed in Docket No. CP89–1975–000 a request pursuant to Section 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide an interruptible transportation service for Phillips 66 Natural Gas Company (Phillips), a producer, under the blanket certificate issued in Docket No. CP86–585–000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request that is on file with the Commission and open to public inspection.

Panhandle states that pursuant to a transportation agreement dated June 13, 1989, under its Rate Schedule PT, it proposes to transport up to 300,000 dekatherms (dt) per day equivalent of natural gas for Phillips. Panhandle states that it would transport the gas from various receipt points in Colorado, Kansas, Oklahoma and Texas, and deliver such gas, less fuel used and unaccounted for line loss, to Haven Pool in Reno County, Kansas.

Panhandle advises that service under § 284.223(a) commenced July 1, 1989, as reported in Docket No. ST89–4429–000. Panhandle further advises that it would transport 300,000 dt on an average day and 109,500,000 dt annually.

Comment date: October 6, 1989, in accordance with Standard Paragraph G at the end of this notice.

3. United Gas Pipe Line Company

[Docket No. CP89–1964–000]

August 22, 1989.

Take notice that on August 16, 1989, United Gas Pipe Line Company (United), P.O. Box 1478, Houston, Texas 77251–1478, filed in Docket No. CP89–1964–000, a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act, to transport on an interruptible basis under its blanket certificate Docket No. CP88–6–000, a maximum of 36,000 MMBtu on behalf of Air Products and Chemicals, Inc. (Air Products), an end user, all as more fully set forth in the request on file with the Commission and open to public inspection.

United States that service commenced July 1, 1989, under § 284.223 (a) of the Commission Regulations, as reported in Docket No. ST89–4276 and estimates the volumes transported to be 36,000 MMBtu per day on peak day and average day, and 13,158,250 MMBtu on an annual basis.

United also indicates that no new facilities are to be constructed.

Comment date: October 6, 1989, in accordance with Standard Paragraph G at the end of this notice.

4. United Gas Pipe Line Company

[Docket No. CP89–1962–000]

August 22, 1989.

Take notice that on August 16, 1989, United Gas Pipe Line Company (United), P.O. Box 1478, Houston, Texas 77152–1478, filed in Docket No. CP89–1171–000 an application pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Marathon Oil Company (Marathon), a producer of natural gas, under United's blanket certificate issued in Docket No. CP88–6–000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is one file with the Commission and open to public inspection.

United proposes to transport, on an interruptible basis, up to 151,583 MMBtu per day for Marathon. United states that construction of facilities would not be required to provide the proposed service.

United further states that the maximum day, average day, and annual transportation volumes would be approximately 151,583 MMBtu, 151,583, MMBtu, and 55,327,795 MMBtu, respectively.

United advises that service under § 284.223(a) commenced July 10, 1989, as reported in Docket No. ST89–4277.

Comment date: October 6, 1989, in accordance with Standard Paragraph G at the end of this notice.

5. Colorado Interstate Gas Company

[Docket No. CP89–1970–000]

August 23, 1989.

Take notice that on August 18, 1989, Colorado Interstate Gas Company (CIG), Post Office Box 1087, Colorado Springs, Colorado 80944, filed in Docket No. CP89–1970–000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Phillips Pipe Line Company (Phillips), an end user, under its blanket authorization issued in Docket No. CP86–589–000, *et al.*, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

CIG would perform the proposed firm transportation service for Phillips, pursuant to a firm transportation service agreement dated July 1, 1989. The transportation agreement is effective until the earlier of June 30, 1990, or the date CIG receives authority to, or is required to, abandon service rendered pursuant to its blanket transportation certificate in Docket No. CP89–589–000, *et al.* CIG proposes to transport up to 200 Mcf of natural gas on a peak and average day; and on an annual basis 73,000 Mcf of natural gas for Phillips. CIG proposes to receive the subject gas at an existing point of receipt located in sec. 24 T. 18N., R. 106 W., Sweetwater County, Wyoming and redeliver the gas, less fuel gas and lost and unaccounted-for gas, for the account of Phillips in sec. 33 T. 22 S., R. 60 W., Pueblo County, Colorado. CIG avers that no new facilities are required to provide the proposed service.

It is explained that the proposed service is currently being performed pursuant to the 120-day self-implementing provision of § 284.223(a)(1) of the Commission's Regulations. CIG commenced such self-implementing service on July 1, 1989, as reported in Docket No. ST89–4244–000.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

6. ANR Storage Company

[Docket No. CP89–1953–000]

August 23, 1989.

Take notice that on August 15, 1989, ANR Storage Company (ANRS), 500 Renaissance Center, Detroit, Michigan 48243, filed in Docket No. CP89–1953–000, an application pursuant to section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing new storage services pursuant to two new rate schedules, Rate Schedules FS (Firm Storage Service) and IS (Interruptible Storage Service) to be incorporated in a new ANRS Original Volume No. 1 FERC Gas Tariff, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

ANRS states that the proposed Rate Schedule FS provides for firm winter storage service. It is stated that for the period November 1 through March 31 (winter period), the storage demand withdrawal quantity cannot be greater than 1/30 of the maximum storage quantity nor can it be less than 1/120 of the maximum storage quantity. It is also stated that for the period April 1 through October 31 (summer period), the maximum daily injection quantity is 1/200 of the maximum storage quantity. It is further stated that the storage demand withdrawal quantity and maximum storage quantity would be specified in the FS service agreement. ANRS states that injection and withdrawal quantities above the maximum contract entitlements would be accepted on a best efforts basis.

ANRS states that the charge for FS service would consist of a maximum FS deliverability reservation rate of $2.083 per dekatherm per month and a maximum FS capacity reservation rate of $.452 per dekatherm. It is stated that fuel would consist of 1.3 percent for injection and 0.2 percent for withdrawal which must be provided in kind by the customer. ANRS states that Rate Schedule FS would be available to all customers on a first-come, first-served basis.

ANRS states that Rate Schedule IS provides for an interruptible storage service that ANRS would make available from time to time if it has storage capacity available after providing for firm obligations. It is explained that subject to ANRS' best efforts to withdraw gas, the maximum daily withdrawal quantity, during the summer period, is 1/30 of the customer's working storage gas as of the last day of the prior month and, during the winter period, is 1/100 of the customer's working storage gas at the end of the preceding summer period. It is also explained that subject to ANRS' best efforts to inject gas, the maximum daily injection quantity is 1/30 of the customer's maximum storage quantity. It is stated that ANRS may, if storage capacity is needed to meet its firm obligations, require customer, upon forty-eight hours notice, to withdraw all IS working storage gas within forty-five days. ANRS states that any working storage gas remaining at the end of such forty-five day period would be retained by ANRS.

ANRS states that the charge for IS service would consist of a maximum monthly storage commodity rate of 5.1 cents per dekatherm of monthly average working storage gas. It is stated that fuel would consist of 1.3 percent for injection and 0.2 percent for withdrawal which must be provided in kind by the customer. It is stated that Rate Schedule IS would be available to all customers on a first-come, first-served basis.

ANRS states that each customer would be responsible for arranging all necessary transportation to and from the point of injection/withdrawal. It is stated that such point is located at the interconnection of ANRS' facilities with the facility of Great Lakes Gas Transmission Company in Crawford County, Michigan.

ANRS requests authority to provide service under the above described rate schedules for interested customers, on a self-implementing basis, with pregranted abandonment, without further authorization by the Commission. ANRS also requests authority to discount rates between the maximum and minimum rates requested.

Comment date: September 13, 1989, in accordance with Standard Paragraph F at the end of this notice.

7. Great Lakes Gas Transmission

[Docket No. CP89–1947–000]

August 23, 1989.

Take notice that on August 14, 1989, Great Lakes Gas Transmission Company (Great Lakes), 2100 Buhl Building, Detroit, Michigan 48226, filed in Docket No. CP89–1947–000, an application pursuant to section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing Great Lakes to transport natural gas, on an interruptible basis, for the account of MichCon Trading Company (Shipper), until November 1, 1994, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Great Lakes states that Shipper has requested that Great Lakes transport up to 200,000 Mcf per day for the account of Shipper, from a point on the International Border between the United States and Canada, at Emerson, Manitoba (Emerson), where the facilities of Great Lakes interconnect with the facilities of TransCanada PipeLines Limited, to existing points of interconnection between the facilities of Great Lakes and Michigan Consolidated Gas Company located within the State of Michigan at Crystal Falls, Rapid River, Sault Ste. Marie, Mackinaw City, Pellston, Boyne City, Petoskey, Gaylord and Belle River Mills. Great Lakes also states that the subject Canadian natural gas would be purchased by Shipper and sold to end users in the State of Michigan. Great Lakes indicates that Shipper and Great Lakes have entered into a Transportation Service Agreement, dated June 8, 1989 (Service Agreement), which would implement these arrangements. Great Lakes further indicates that the Service Agreement provides for a term ending November 1, 1994.

Great Lakes states that the Service Agreement provides for a rate for the transportation service, to delivery points in Great Lakes' Central Zone which is equal to the 100 percent load factor rate, as determined from the demand and commodity components utilized in the transportation component of existing Rate Schedule CQ–2 of Great Lakes' FERC Gas Tariff, under which volumes of natural gas are also transported from Emerson to Great Lakes' Central Zone.

Great Lakes also states that the Service Agreement provides for a rate for the transportation service to delivery points located in Great Lakes' Eastern Zone which is equal to the 100 percent load factor rate as determined from the demand and commodity components utilized in Rate Schedule T–4 of Great Lakes' FERC Gas Tariff, under which volumes of natural gas are also transported from Emerson to Great Lakes' Eastern Zone. Great Lakes indicates that no new facilities would be required to provide either of the proposed services.

Comment date: September 13, 1989, in accordance with Standard Paragraph F at the end of the notice.

8. Panhandle Eastern Pipe Line Company

[Docket No. CP89–1974–000]

August 23, 1989.

Take notice that on August 21, 1989, Panhandle Eastern Pipe Line Company, (Panhandle) P.O. Box 1642, Houston, Texas, 77251–1642 filed in Docket No.

CP89–1974–000 a request pursuant to section 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Levinson Partners Corporation (Levinson), under its blanket authorization issued in Docket No. CP86–585–000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Panhandle would perform the proposed interruptible transportation service for Levinson, a shipper and producer of natural gas, pursuant to a transportation agreement for interruptible service under Rate Schedule PT dated June 21, 1989 (Contract No. P–PLT–2865). The term of the transportation agreement is for a primary term of one month from the initial date for service, and shall continue in effect month-to-month thereafter until terminated by either party upon at least 30 days' prior notice to the other party. Panhandle proposes to transport on a peak day up to 750 dekatherm equivalent; on an average day up to 450 dekatherm equivalent; and on an annual basis 164,250 dekatherm equivalent of natural gas for Levinson. Panhandle proposes to receive the subject gas from Tom Federal 1, North Creston 1, and Windy Hill 1 in Carbon County, Wyoming. Panhandle would then transport and redeliver subject gas, less used and unaccounted for line loss, to Western Transmission in Carbon County, Wyoming. Panhandle proposes to charge the then effective, applicable rates and charges under its PT rate schedule. Panhandle avers that no new facilities nor expansion of existing facilities are required to provide the proposed service.

It is explained that the proposed service is currently being performed pursuant to the 120-day self implementing provision of § 284.223(a)(1) of the Commission's Regulations. Panhandle commenced such self-implementing service on July 11, 1989, as reported in Docket No. ST89–4437–000.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

9. Texas Gas Transmission Corporation

[Docket No. CP89–1979–000]

August 23, 1989.

Take notice that on August 21, 1979, Texas Gas Transmission Corporation (Texas Gas), 3800 Frederica Street, Owensboro, Kentucky 42301, filed in Docket No. CP89–1979–000 a request pursuant to § 157.205 of the Commission's Regulations for authorization to transport natural gas for Ladd Gas Marketing, Inc. (Ladd), a marketer of natural gas, which has identified the end-user of the gas as Western Kentucky Gas Company, under Texas Gas' blanket certificate issued in Docket No. CP88–686–000 pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commisison and open to public inspection.

Texas Gas proposes to transport, on an interruptible basis, up to 120,000 MMBtu equivalent on a peak day, 72,000 MMBtu equivalent on an average day and 43,800,000 MMBtu equivalent on an annual basis for Ladd. It is stated that Texas Gas would receive the gas for Ladd's account at various points on Texas Gas' system in Texas, Louisiana, offshore Texas, offshore Louisiana, Illinois, Arkansas, Indiana, and Kentucky, and would deliver equivalent volumes at various points on Texas Gas' system in Kentucky. It is asserted that existing facilities would be used for the transportation service and that no construction of additional facilities would be required. It is explained that the transportation service commenced July 15, 1989, under the automatic authorization provisions of Section 284.223 of the Commission's Regulations, as reported in Docket No. ST89–4319.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

10. Texas Eastern Transmission Corporation

[Docket No. CP87–92–006]

August 23, 1989.

Take notice that on August 22, 1989, Texas Eastern Transmission Corporation, (Applicant), P.O. Box 2521, Houston, Texas 77252, filed in Docket No. CP87–92–006 a petition to amend the Certificate of Public Convenience and Necessity, pursuant to Section 7(c) of the Natural Gas Act, issued on June 7, 1989 in this proceeding to substitute an electric motor prime mover in lieu of the gas turbine authorized at Applicant's Sarahsville Compressor Station 19, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant states that by *Order Issuing Certificates* issued June 7, 1989,[1] (Order) Applicant [2] was authorized, *inter alia* to construct and operate in 1989 and 1990 its Capacity Restoration Program consisting of (1) 281.24 miles of 8 to 42-inch pipeline and 32,000 Horsepower of additional compression, in Ohio, West Virginia, Pennsylvania and New Jersey, (2) the removal of 215 miles of 20 and 24-inch pipeline, (3) and the placement into idle service of 344.73 miles of 20 and 24-inch pipeline. Applicant states that it accepted the certificate on June 9, 1989, and that construction activities were commenced June 15, 1989.

Applicant further states that the Order authorized Applicant to construct and Operate, in 1990, a 11,000 HP gas turbine driven compressor at its existing Compressor Station 19, near Sarahsville, Ohio, and provided that the proposed gas turbine compressor be relocated and certain noise control procedures be approved and implemented to satisfy the recommendations of the Environmental Assessment.

Applicant states that the existing units at Station 19 consist of four electric motor compressor packages totaling 6500 HP, and that in consideration of the Environmental Assessment recommendations, Applicant investigated the feasibility of substituting an electric motor as the prime mover for the proposed compressor which could be installed adjacent to the existing units. Applicant states that its investigation showed that the electric motor, as the prime mover, would reduce or eliminate the environmental impacts.

Comment date: September 13, 1989, in accordance with the first subparagraph of Standard Paragraph F at the end of this notice.

11. Viking Gas Transmission Company

[Docket No. CP88–266–005]

August 23, 1989.

Take notice that on August 15, 1989, Viking Gas Company (Viking), P.O. Box 2511, Houston, Texas 77252, filed an application pursuant to Section 7(c) of the Natural Gas Act for an amended certificate authorizing an extension of the winter season transportation service provided thereunder to Northern States Power Company (NSP), all as more fully set forth in the petition to amend which is on file with the Commission and open to public inspection.

Viking states that the order issued in Docket No. CP88–266–000, as amended, authorizes the transportation of up to

[1] *Texas Eastern Transmission Corporation, et al.*, Docket Nos. CP87–5–003, *et al.*, *Order Issuing Certificates.*

[2] CNG Transmission Corporation was a joint applicant with Applicant for a portion of the 1989 facilities, but is not involved in or affected by the facilities subject of this Petition.

30,800 dt equivalent of natural gas per day on a firm basis during the winter season (November to March) for NSP for a term ending the earlier of October 31, 1989, or the date that Viking accepts a blanket certificate under § 284.221 of the Commission's Regulations. It is asserted that Viking requests an extension of the term of the firm seasonal transportation service for an additional year to coincide with the term agreed on in Rate Schedule T-9, or in the alternative Viking seeks to extend this winter service for one year. It is indicated that the extension of the term is required in order for NSP to maintain its long-term gas supplies and to meet the firm gas requirements of residential and commercial customers located on Viking's system during the winter heating season.

Comment date: September 13, 1989, in accordance with the first of Standard Paragraph F at the end of this notice.

12. Panhandle Eastern Pipe Line Company

[Docket No. CP89-1976-000]

August 23, 1989.

Take notice that on May 23, 1989, Panhandle Eastern Pipe Line Company (Panhandle), P.O. Box 1642, Houston, Texas 77251-1642, filed in Docket No. CP89-1976-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas for Gastrak Corporation (Gastrak), a marketer of natural gas, under Panhandle's blanket certificate issued in Docket No. CP86-585-000, pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the application which is on file with the Commission and open for public inspection.

Pursuant to a gas transportation agreement dated June 16, 1989, Panhandle requests authority to transport up to 161,500 Dt. of natural gas per day, on an interruptible basis, on behalf of Gastrak. Panhandle states that the agreement provides for it to receive gas from various existing points of receipts along its system and to redeliver the gas, less fuel used and unaccounted for line loss, to Central Illinois Public Service Company at existing points of delivery in various counties of Illinois. Gastrak has informed Panhandle that it expects to have the full 161,500 Dt. transported on an average day and, based thereon, estimates that the annual transportation quantity would be 58,947,500 Dt. Panhandle advises that the transportation service commenced on July 14, 1989, as reported in Docket No. ST89-4438, pursuant to § 284.223 of the Commission's Regulations.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

13. Northern Natural Gas Company, Division of Enron Corporation

[Docket No. CP89-1967-000]

August 23, 1989.

Take notice that on August 17, 1989, Northern Natural Gas Company, Division of Enron Corporation (Northern), 1400 Smith Street, P.O. Box 1188, Houston, Texas 77251-1188, filed in Docket No. CP89-1967-000 a request pursuant to § 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Feagan Gathering Company (Feagan), under the blanket certificate issued in Docket No. CP86-435-000 pursuant to Section 7 of the Natural Gas Act, all or more fully set forth in the request on file with the Commission and open to public inspection.

Northern states that it proposes up to 18,000 MMBtu of natural gas per day for Feagan, on a peak day, 13,500 MMBtu on an average day and 2,160,000 MMBtu annually, under Rate Schedule IT-1. This service was reported to the Commission in Docket No. ST89-4405-000. Northern further states that construction of facilities will not be required to provide the proposed service.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

14. Northwest Pipeline Corporation

[Docket No. CP89-1972-000]

August 23, 1989.

Take notice that on August 18, 1989, Northwest Pipeline Corporation (Northwest), 295 Chipeta Way, Salt Lake City, Utah 84108, filed in Docket No. CP89-1972-000 an application pursuant to §§ 157.205 and 284.223 (18 CFR 157.205 and 284.223) of the Commission's Regulations under the Natural Gas Act for authorization to provide interruptible transportation service for Exxon Corporation (Exxon), a producer of natural gas, pursuant to Northwest's blanket transportation certificate issued by Commission order on January 19, 1988, in Docket No. CP86-578-000, All as more fully set forth in the application which is on file with the Commission and open to public inspection.

Northwest states it will receive the gas at various system supply wells in Lincoln, Sublette and Sweetwater Counties, Wyoming, for transportation and delivery, for the account of Exxon, to the Opal Plant in Lincoln County, Wyoming and to the Black Canyon Line in Sublette County, Wyoming.

Northwest proposes to transport daily up to 20,000 MMBtu equivalent of gas on a peak day, 5,000 MMBtu equivalent of gas on an average day and approximately 1,809,000 MMBtu equivalent of gas annually. Northeast states the transportation service commenced under the 120-day automatic authorization of § 284.223(a) of the Commission's Regulations on July 1, 1989, pursuant to a transportation agreement dated September 26, 1988, as amended September 26, 1988. Northwest notified the Commission of the commencement of the transportation service in Docket No. ST89-4402-000 on August 4, 1989.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

15. United Gas Pipe Line Company

[Docket No. CP89-1968-000]

August 23, 1989.

Take notice that on August 17, 1989, United Gas Pipe Line Company (United), P.O. Box 1478, Houston, Texas 77251-1478, filed in Docket No. CP89-1968-000, a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide an interruptible transportation service on behalf of Texaco Gas Marketing (Texaco), a marketer of natural gas, under United's blanket certificate issued in Docket No. CP88-6-000 pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

United states that it would transport a maximum daily quantity of 103,000 MMBtu for Texaco pursuant to an Interruptible Gas Transportation Agreement, dated July 25, 1987, as amended June 23, 1989, between United and Texaco. United further states that it would receive the natural gas at existing points of receipt in the states of Louisiana and Texas and would redeliver the natural gas at existing points of delivery in the states of Louisiana, Texas and Mississippi. United indicates that the estimated average day and annual quantities to be transported would be 103,000 MMBtu and 37,595,000 MMBtu, respectively.

United states that it commenced the transportation of natural gas for Texaco on July 18, 1989, as reported in Docket No ST89-4310, for a 120-day period pursuant to § 284.223(a) of the

Commission's Regulations (18 CFR 284.223(a)).

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

16. Columbia Gulf Transmission

[Docket No. CP89-1969-000]
August 23, 1989.

Take notice that on August 17, 1989, Columbia Gulf Transmission Company (Columbia Gulf), 3805 West Alabama, Houston, Texas 77027, filed in Docket No. CP89-1969-000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205 and 284.223) for authorization to transport, on an interruptible basis, on behalf of Exxon Corporation (Exxon), a marketer of natural gas, under Columbia's blanket certificate issued in Docket No. CP86-239-000, pursuant to Section 7(c) of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

It is stated that the volume anticipated to be transported on a peak day is a maximum of 75,000 MMBtu, on an average day up to 9,000 MMBtu, and approximately 3,285,000 MMBtu on an annual basis.

It is also stated that Columbia Gulf proposes to receive the gas in St. Mary, Iberia, Cameron and Jefferson Parishes, Louisiana and from West Cameron Block 630A, Offshore Louisiana and proposes to redeliver the gas for Exxon to points in Vermillon, St. Mary, Acadia and Terrebonne Parishes, Louisiana. Columbia Gulf states that this service commenced on July 7, 1989, as reported in Docket No. ST89-4431-000, pursuant to Section 284.223(a) of the Commission's Regulations.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

17. Texas Gas Transmission Corporation

[Docket No. CP89-1977-000]
August 23, 1989.

Take notice that on August 21, 1989, Texas Gas Transmission Corporation (Texas Gas), 3800 Frederica Street, Owensboro, Kentucky 42301, filed in Docket No. CP89-1977-000 an application pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Ladd Gas Marketing Inc. (Ladd Marketing), under Texas Gas' blanket certificate issued in Docket No. CP88-686-000 pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Texas Gas proposes to transport, on an interruptible basis, up to 300,000 MMBtu per day for Ladd Marketing. Texas Gas states that facilities required to be constructed would be installed, owned, and operated as specified in Exhibits B and C of the transportation agreement.

Texas Gas further states that the maximum day, average day, and annual transportation volumes would be approximately 300,000 MMBtu, 180,000 MMBtu and 109,500,000 MMBtu respectively.

Texas Gas advises that service under § 284.223(a) commenced July 14, 1989, as reported in Docket No. ST89-4320.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

18. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89-1937-000]
August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89-1937-000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to the Philadelphia Gas Works (PGW), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 11, 1970, it entered into a service agreement with PGW providing for the sale for resale of a maximum daily quantity of 159,625 Mcf of natural gas per day under Transco's Rate Schedule CD-3. Transco further states that the Commission authorized such service to PGW by order issued in Docket No. CP70-193-000.

Transco indicates that on December 1, 1987, PGW converted, pursuant to § 284.10 of the Commission's Regulations, a total of 23,944 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states PGW's current Rate Schedule CD-3 firm sales entitlement is 135,681 Mcf of natural gas per day. Transco indicates that on April 1, 1989, PGW converted, pursuant to § 284.10 of the Commission's Regulations, an additional 5,042 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states further that in the instant application, it seeks authorization to partially abandon PGW's present firm sales entitlement pursuant to Rate Schedule CD-3 by a total quantity of 5,042 Mcf of natural gas per day, resulting in a revised Rate Schedule CD-3 firm sales entitlement of 130,639 Mcf of natural gas per day for PGW.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of the notice.

19. Northwest Pipeline Corporation

[Docket No. CP89-1981-000]
August 24, 1989

Take notice that on August 21, 1989, Northwest Pipeline Company (Northwest) filed in Docket No. CP89-1981-000 a request pursuant to §§ 157.205 and 284.233 of the Commission's Regulations under the Natural Gas Act, to transport natural gas under its blanket certificate issued in Docket No. CP86-578-000 on behalf of Coastal Gas Marketing Company (Coastal), a marketer, all as more fully set forth in the request on file with the Commission and open to public inspection.

Northwest indicates that service commenced July 14, 1989, as reported in Docket No. ST89-4427-000 and estimates the volumes transported to be 200,000 MMBtu per day on a peak day, 800 MMBTU on a average day plus, 292,000 MMBtu on an annual basis for Coastal.

Northwest states that no new facilities are to be constructed.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

20. Northwest Pipeline Corporation

[Docket No. CP89-1957-000]
August 24, 1989

Take notice that on August 22, 1989, Northwest Pipeline Corporation (Northwest), 295 Chipeta Way, Salt Lake City, Utah 84108, filed in Docket No. CP89-1957-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide an interruptible transporation service for Conoco Inc. (Conoco), a producer, under the blanket certificate issued in Docket No. CP86-578-000, pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the request that is on file with the Commission and open to public inspection.

Northwest states that pursuant to a transportation agreement dated November 1, 1988, as amended

December 5, 1988, under its Rate Schedule TI–1, it proposes to transport up to 30,000 MMBtu per day equivalent of natural gas for Conoco. Northwest states that it would transport the gas through its system from any transportation receipt point on its system to any transportation delivery point on its system, as defined in the December 5, 1988, amendment.

Northwest advises that service under Section 284.223(a) commenced November 1, 1988, as reported in Docket No. ST89–4421 (filed August 7, 1989). Northwest further advises that it would transport 3,200 MMBtu on an average day and 1,200,000 MMBtu annually.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

21. Northern Natural Gas Company, a Division of Enron Corp

[Docket No. CP89–1951–000]

August 24, 1989

Take notice that on August 15, 1989, Northern Natural Gas Company, (Northern), Division of Enron Corp., filed in the above referenced docket, pursuant to Sections 4 and 7(c) of the Natural Gas Act and Parts 154 and 157 of the commission's Regulations under the Natural Gas Act (18 CFR 157.14), its application for a certificate of public convenience and necessity authorizing the implementation of a gas inventory charge (GIC) on an interim basis, pursuant to the tariff sheets submitted therewith.

Specifically, Northern requests authorization to establish and implement a demand-based interim GIC, which it states is generally patterned after the provisions of the "Competitive Price Concept" described in the Commission's Notice of Proposed Policy Statement in Docket No. PL89–1–000. Northern asserts that it has made certain changes in its proposal which will: (1) Reduce the rate Northern's customers would otherwise pay, (2) provide a means for customers to mitigate the amoung billed by Northern, and (3) generally adapt The Commission's proposed guidelines to Northern's specific business operations.

The interim GIC Northern proposes herein would impose a monthly inventory charge of $4.80 per MMBtu on each unit of firm sales entitlement of the purchaser (adjusted for storage injections). The GIC would apply to all of Northern's buyers under its firm sales rate schedules. Northern proposes to implement the interim GIC on October 1, 1989, and proposes that such charge remain in effect for a two-year period until October 1, 1991 unless earlier terminated in the event Northern is issued a satisfactory certificate in Docket No. CP89–1227 or receives approval to implement a permanent or long-term GIC. Northern also proposes to provide for certain performance credits for volumes purchased.

Northern proposes to continue its current practice of announcing in advance the monthly price for its system supply gas. Northern states that it will calculate a composite competitive price for spot gas sales delivered into the main line of five major interstate pipeline companies in the Mid-Continent Area, plus a transportation and fuel component, and other applicable surcharges (such as ACA, GRI, and TOP charges). Northern's proposal requires that its announced system supply price be within or below a 4 percent tolerance of such competitive price.

Northern does not propose to provide any additional conversion rights to its buyers. Northern proposes to suspend certain portions of its current PGA mechanism during the effective period of the interim GIC and to direct bill or refund any PGA account 191 balances as of August 31, 1989. Northern proposes to reconcile all of its gas supply costs and sales and GIC revenues and make refunds, together with interest, within one year of the termination of the interim GIC, if revenues exceed cost.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of this notice.

22. Texas Gas Transmission Corporation

[Docket No. CP89–1978–000]

August 24, 1989.

Take notice that on August 21, 1989, Texas Gas Transmission Corporation (Texas Gas), 3800 Frederica Street, Owensboro, Kentucky 42301, filed in Docket No. CP89–1978–000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natual Gas Act (18 CFR 157.205) and the Natural Gas Policy Act (18 CFR 284.223) for authorization to transport natural gas for Natural Gas Clearinghouse, Inc. (NGC) under Texas Gas' blanket certificate issued in Docket No. CP88–686–000 pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Texas Gas proposes to transport on an interruptible basis up to 300,000 MMBtu of natural gas equivalent on behalf of NGC pursuant to a gas transportation agreement dated November 18, 1988, between Texas Gas and NGC. Texas Gas would receive the gas at various existing points of receipt on its system in offshore Texas and redeliver equivalent volumes, less fuel and lost and unaccounted for volumes, at an existing delivery point in offshore Texas.

Texas Gas further states that the estimated average daily and annual quantities would be 50,000 MMBtu and 18,240,000 MMBtu, respectively. Service under § 284.223a) commenced on July 8, 1989, as reported in Docket No. ST89–4204–000, it is stated.

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

23. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1973–000]

August 24, 1989.

Take notice that on August 21, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1973–000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act for authorization to transport gas on an interruptible basis for Transco Energy Marketing Company (TEMCO) under its blanket certificate issued in Docket No. CP88–328–000 pursuant to Section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

Transco states that it would receive the gas for TEMCO at various existing points of receipt in offshore Louisiana, Louisiana, offshore Texas, Texas, Alabama, Georgia, Pennsylvania and New Jersey, and would redeliver the gas at various existing delivery points located in Louisiana.

Transco further states that the maximum daily, average daily and annual quantities that it would transport for TEMCO would be 175,500 dt equivalent of natural gas, 175,500 dt equivalent of natural gas and 64,057,500 dt equivalent of natural gas, respectively.

Transco indicated that in a filing made with the Commission in Docket No. ST89–4441, it reported that transportation service for TEMCO commenced on July 1, 1989 under the 120-day automatic authorization provisions of § 284.223(a).

Comment date: October 10, 1989, in accordance with Standard Paragraph G at the end of this notice.

24. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1938–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1938–000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to the City of Laurens, South Carolina (Laurens), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 13, 1970, it entered into a service agreement with Laurens providing for the sale for resale of a maximum daily quantity of 7,840 Mcf of natural gas per day under Transco's Rate Schedule CD–2. Transco further states that the Commission authorized such service to Laurens by order issued in Docket No. CP70–193–000.

Transco indicates that on April 1, 1989, Laurens converted, pursuant to § 284.10 of the Commission's Regulations, 1,176 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states that in the instant application, it seeks authorization to partially abandon Laurens's present firm sales entitlement pursuant to Rate Schedule CD–2 by a total quantity of 1,176 Mcf of natural gas per day, resulting in a revised Rate Schedule CD–2 firm sales entitlement of 6,664 Mcf of natural gas per day for Laurens.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of this notice.

25. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1936–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1936–000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to the City of Danville, Virginia (Danville), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 12, 1970, it entered into a service agreement with Danville providing for the sale for resale of a maximum daily quantity of 26,000 Mcf of natural gas per day under Transco's Rate Schedule CD–2. Transco further states that the Commission authorized such service to Danville by order issued in Docket No. CP70–193–000.

Transco indicates that on April 1, 1989, Danville converted, pursuant to § 284.10 of the Commission's Regulations, a total of 4,000 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule CD–2. Transco states that in the instant application, it seeks authorization to partially abandon Danville's present firm sales entitlement pursuant to Rate Schedule CD–2 by a total quantity of 2,000 Mcf of natural gas per day, resulting in a revised Rate Schedule CD–2 firm sales entitlement of 22,000 Mcf of natural gas per day for Danville.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of the notice.

26. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1935–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1935–000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to Philadelphia Electric Company (PECO), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on January 1, 1989, it entered into a service agreement with PECO providing for the sale for resale of 88,692 Mcf of natural gas per day under Transco's Rate Schedule CD–3. Transco further states that the Commission authorized such service to PECO by order issued in Docket No. CP70–193–000.

Transco indicates that on April 1, 1989, PECO converted, pursuant to Section 284.10 of the Commission's Regulations, 14,162 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states that in the instant application, it seeks authorization to partially abandon PECO's present firm sales entitlement pursuant to Rate Schedule CD–3 by a total quantity of 14,162 Mcf of natural gas per day, resulting in a revised Rate Schedule CD–3 firm sales entitlement of 74,530 Mcf of natural gas per day for PECO.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of the notice.

27. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1933–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1933–000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to the Pennsylvania Gas and Water Company (PG&W), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 5, 1970, it entered into a service agreement with PG&W providing for the sale for resale of 46,900 Mcf of natural gas per day under Transco's Rate Schedule CD–3. Transco further states that the Commission authorized such service to PG&W by order issued in Docket No. CP70–193–000.

Transco indicates that on April 1, 1989, PG&W converted, pursuant to § 284.10 of the Commission's Regulations, a total of 12,000 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states that in the instant application, it seeks authorization to partially abandon PG&W's present firm sales entitlement pursuant to Rate Schedule CD–3 by a total quantity of 12,000 Mcf of natural gas per day, resulting in a revised Rate Schedule CD–3 firm sales entitlement of 34,900 Mcf of natural gas per day for PG&W.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of this notice.

28. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1939–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1939–000 a request pursuant to Sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to Fort Hill Natural Gas Authority (Fort Hill), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 5, 1970, it entered into a service agreement

with Fort Hill providing for the sale for resale of a maximum daily quantity of 11,900 Mcf of natural gas per day under Transco's Rate Schedule CD–2. Transco further states that the Commission authorized such service to Fort Hill by order issued in Docket No. CP70–193–000.

Transco indicates that on April 1, 1989, Fort Hill converted, pursuant to § 284.10 of the Commission's Regulations, 1,785 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states that in the instant application, it seeks authorization to partially abandon Fort Hill's present firm sales entitlement pursuant to Rate Schedule CD–2 by a total quantity of 1,785 Mcf of natural gas per day, resulting in a revised Rate Schedule CD–2 firm sales entitlement of 10,115 Mcf of natural gas per day for Fort Hill.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of this notice.

29. Transcontinental Gas Pipe Line Corporation

[Docket No. CP89–1934–000]

August 24, 1989.

Take notice that on August 10, 1989, Transcontinental Gas Pipe Line Corporation (Transco), P.O. Box 1396, Houston, Texas 77251, filed in Docket No. CP89–1934–000 a request pursuant to sections 7(b) and 16 of the Natural Gas Act for permission and approval to abandon, partially, certain sales service to the Delmarva Power and Light Company (Delmarva), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that on November 5, 1970, it entered into a service agreement with Delmarva providing for the sale for resale of 54,800 Mcf of natural gas per day under Transco's Rate Schedule CD–3. Transco further states that the Commission authorized such service to Delmarva by order issued in Docket No. CP70–193–000.

Transco indicates that on October 1, 1988, Delmarva converted, pursuant to § 284.10 of the Commission's Regulations, a total of 8,220 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states Delmarva's current Rate Schedule CD–3 firm sales entitlement is 46,580 Mcf of natural gas per day. Transco indicates that on April 1, 1989, Delmarva converted, pursuant to § 284.10 of the Commission's Regulations, an additional 8,220 Mcf of natural gas per day of its firm entitlement under the service agreement to firm transportation under Transco's Rate Schedule FT. Transco states further that in the instant application, it seeks authorization to partially abandon Delmarva's present firm sales entitlement pursuant to Rate Schedule CD–3 by a total quantity of 8,220 of natural gas per day, resulting in a revised Rate Schedule CD–3 firm sales entitlement of 38,360 Mcf of natural gas per day for Delmarva.

Comment date: September 14, 1989, in accordance with Standard Paragraph F at the end of the 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 Commission's 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.

G. Any person or the Commission's staff may, within 45 days after the issuance of the instant notice by the Commission's, 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 § 158.205 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 therefore, 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. 89–20586 Filed 8–31–89; 8:45 am]

BILLING CODE 6717–01–M

[Docket No. QF88–262–002]

Everett Energy Corp.; Application for Commission Certification of Qualifying Status of a Cogeneration Facility

August 25, 1989.

On August 16, 1989, Everett Energy Corporation (Applicant), of 236 North Falmouth Highway, North Falmouth, Massachusetts 02556, submitted for filing an application for certification of a facility as a qualifying cogeneration facility pursuant to § 292.207 of the Commission's regulations. No determination has been made that the submittal constitutes a complete filing.

The topping-cycle cogeneration facility will be located in the City of Everett, Massachusetts. The facility will consist of two combustion turbine generating units, two waste heat recovery boilers and a steam turbine generating unit. Thermal energy recovered from the facility will be sold to Exxon Company, USA for heating its asphalt and heavy fuel oil tanks, and tracing pipelines. The net electric power production capacity of the facility will be 89.6 MW. The primary energy source will be natural gas. The facility is scheduled to be installed and in operation by December 1, 1991.

Any person desiring to be heard or objecting to the granting of qualifying status should file a petition 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. All such petitions or protests must be filed within 30 days after the date of publication of this notice and must be served on the applicant. 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 petition to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-20587 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. QF89-325-000]

Metropolitan Knox Solid Waste Authority, Inc.; Application for Commission Certification of Qualifying Status of a Small Power Production Facility

August 25, 1989.

On August 18, 1989, The Metropolitan Knox Solid Waste Authority, Inc. (Applicant), of 1211 Wray Street, Knoxville, Tennessee 37917 submitted for filing an application for certification of a facility as a qualifying small power production facility pursuant to § 292.207 of the Commission's regulations. No determination has been made that the submittal constitutes a complete filing.

The small power production facility will be located in Knoxville, Tennessee. The facility will consist of two (2) mass burn combustors, and associated boilers and steam turbine generators. The maximum electric power production capacity will be 30.3 megawatts. The primary energy source will be biomass in the form of municipal solid waste. Natural gas will be used for start-ups and shutdowns. The facility is scheduled to begin operation in August 1992.

Any person desiring to be heard or objecting to the granting of qualifying status should file a petition 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. All such petitions or protests must be filed within 30 days after the date of publication of this notice and must be served on the applicant. 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 petition to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-20588 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. QF85-678-003]

Northeastern Power Co., Application for Commission Recertification of Qualifying Status of a Cogeneration Facility

August 25, 1989.

On August 18, 1989, Northeastern Power Company (Applicant) of 200 South Broad Street, Philadelphia, Pennsylvania 19102 submitted for filing an application for recertification of a facility as a qualifying cogeneration facility pursuant to § 292.207 of the Commission's regulations. No determination has been made that the submittal constitutes a complete filing.

The topping-cycle cogeneration facility is located in Kline Township, Schuylkill County, Pennsylvania. The facility is a 50 MW, net culm, silt, and coal fired plant. The application for recertification requests a change in ownership. Applicant states that the legal title to the facility will be transferred by the Applicant on or about October 1989, to The Connecticut National Bank, a national banking association, not in its individual capacity but solely as Owner Trustee under the Trust Agreement dated as of September 15, 1988 between Chrysler Capital Corporation, as the Owner Participant, and the Owner Trustee. The Owner Trustee will lease the facility to the Applicant pursuant to a lease agreement.

Any person desiring to be heard or objecting to the granting of qualifying status should file a petition 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. All such petitions or protests must be filed within 30 days after the date of publication of this notice and must be served on the 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 petition to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-20589 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. TQ89-10-51-000]

Great Lakes Gas Transmission Co.; Granting Late Intervention

August 25, 1989.

Motions to intervene in the above-captioned proceeding were due on June 29, 1989. A motion to intervene out of time was filed on July 14, 1989, by Northern Minnesota Utilities. No answers in opposition to the motion were filed.

The movant appears to have a legitimate interest under the law that is not adequately represented by other parties. It is in the public interest to allow the movant to appear in this proceeding. Accordingly, good cause exists for granting the late intervention.

Pursuant to § 375.302 of the Commission's Regulations (18 CFR 375.302 (1988)), the movant is permitted to intervene in this proceeding subject to the Commission's rules and regulations under the Natural Gas Act, 15 U.S.C. 717-171(w). Participation of the late intervenor shall be limited to matters set forth in its motion to intervene. The admission of the late intervenor shall not be construed as recognition by the Commission that the intervenor might be aggrieved by any order entered in this proceeding.

Lois D. Cashell,

Secretary.

[FR Doc. 89-20591 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. TM90-1-51-000]

Great Lakes Gas Transmission Co.; Proposed Changes in FERC Gas Tariff Annual Charges Adjustment Clause Provisions

August 25, 1989.

Take notice that Great Lakes Gas Transmission Company ("Great Lakes") on August 21, 1989, tendered for filing Second Revised Sheet No. 57(iv) to its FERC Gas Tariff, First Revised Volume No. 1.

Second Revised Sheet No. 57(iv) reflects the new ACA rate to be charged per the Annual Charges Adjustment Clause provisions established by the Commission in Order No. 472, issued on

May 29, 1987. The new ACA rate to be charged by Great Lakes is per FERC notice given on July 14, 1989 and is to be effective October 1, 1989.

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. All such petitions or protests should be filed on or before September 1, 1989. 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. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-20592 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Project No. 3865-031]

Guadalupe-Blanco River Authority; Rejecting Appeal

August 25, 1989.

On July 14, 1989, Guadalupe-Blanco River Authority, licensee for the Canyon Dam Hydro Project No. 3865, filed a revised Exhibit A in compliance with Article 304 of its license issued December 4, 1986, [1] and ordering paragraph (c) of the order approving as-built exhibits issued May 18, 1989. [2] The revised Exhibit A describes the constructed configuration of the licensed project works. By order issued August 11, 1989, [3] the Director, Division of Project Compliance and Administration (Director), approved the revised Exhibit A.

On August 23, 1989, Canyon Lake Area Citizens Association (CLACA), an intervenor in the license proceeding, filed an appeal of the Director's August 11, 1989 order. The Commission has ruled that it will not entertain appeals of non-material post-license compliance orders. Accordingly, CLACA's appeal of the Director's August 11, 1989 order is dismissed.[4]

Lois D. Cashell,

Secretary.

[FR Doc. 89-20593 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

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[1] 37 FERC ¶ 61,206 (186), *reh'g denied*, 42 FERC ¶ 61,079 (1988).

[2] 47 FERC ¶ 62,158 (1989).

[3] 48 FERC ¶ 62,114 (1989).

[4] *See, e.g.*, Northwest Power Company, Inc., 43 FERC ¶ 61,091 (1988); Goose Creek Hydro Associates, 40 FERC ¶ 61,279 (1987); Kings River Conservation District, 36 FERC ¶ 61,365 (1986). Furthermore, CLACA's status as an intervenor in the licensing proceeding for Project No. 3865 does not carry over to post-license filings. Therefore, CLACA's appeal, not preceded or accompanied by an intervention petition, cannot be entertained in any event. *See* Kings River, *supra*, and Delmar Wagner, 41 FERC ¶ 61,011 (1987).

[Docket Nos. RP89-14-010—TA89-1-45-007—TQ89-1-45-006]

Inter-City Minnesota Pipelines Ltd., Inc.; Tariff Filing

August 25, 1989.

Take notice that on August 21, 1989, Inter-City Minnesota Pipelines, Ltd., Inc. ("Inter-City"), 245 Yorkland Boulevard, North York, Ontario, Canada M2J 1R1, tendered for filing a revised tariff sheet to Original Volume 2 of its FERC Gas Tariff to be effective December 1, 1988.

Original Volume No. 2

Substitute First Revised Fifth Revised Sheet No. 12

Inter-City states that this sheet corrects typographical errors discovered in the sheet filed on August 10, 1989. Those sheets were filed in compliance with the Commission orders issued in these dockets.

Inter-City states that copies of the filing have been mailed to all of its customers and affected state regulatory commissions.

Any persons desiring to protest said filing should file a protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure. All such protests should be filed on or before September 1, 1989. 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. Persons who are already parties to this proceeding need not 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. 89-20594 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. TA90-1-35-000]

West Texas Gas, Inc.; Filing

August 25, 1989.

Take notice that on August 22, 1989, West Texas Gas, Inc. (WTG) filed Sixteenth Revised Sheet No. 3a to its FERC Gas Tariff, Original Volume No. 1, proposed to be effective October 1, 1989. Sixteenth Revised Sheet No. 3a and the accompanying explanatory schedules constitute WTG's annual PGA filing submitted in accordance with the Commission's purchased gas adjustments regulations.

WTG states that copies of the filing were served upon WTG's customers and interested state commissions.

Any persons 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 (1987)). All such motions or protests should be filed on or before September 14, 1989. 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. 89-20595 Filed 8-31-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. G-2737-009, et al.]

Conoco Inc., et al.; Applications for Termination or Amendment of Certificates [1]

August 25, 1989.

Take notice that each of the Applicants listed herein has filed an application pursuant to section 7 of the Natural Gas Act for authorization to terminate or amend certificates as described herein, all as more fully described in the respective applications which are on file with the Commission and open to public inspection.

Any person desiring to be heard or to make any protest with reference to said applications should on or before September 14, 1989, file with the Federal Energy Regulatory Commission, Washington, DC 20426, a petition 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). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but

[1] This notice does not provide for consolidation for hearing of the several matters covered herein.

will not serve to make the protestants parties to the proceeding. Any person wishing to become a party in any proceeding herein must file a petition to intervene in accordance with the Commission's rules.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicants to appear or to be represented at the hearing.

Lois D. Cashell,

Secretary.

Docket No. and date filed	Applicant	Purchaser and Location	Description
G-2737-009, D, Aug. 9, 1989	Conoco Inc., P.O. Box 2197, Houston, TX 77252.	Williams Natural Gas Company, West Panhandle Field, Gray County, Texas.	Assigned 7-1-89 to Caldwell Production Company, Inc.
G-2737-010, D, Aug. 9, 1989	Conoco Inc.	Williams Natural Gas Company, West Panhandle Field, Carson County, Texas.	Assigned 7-1-89 to G.H. Ranch, Inc.
G-6355-002, D, July 19, 1989	do	El Paso Natural Gas Company, Arrowhead Field, Lea County, New Mexico.	Assigned 2-1-88 to Marathon Oil Company.
G-6355-003, D, July 19, 1989	do	do	Assigned 7-1-89 to Lewis B. Burleson.
CI67-1650-003, D, July 18, 1989	do	Panhandle Eastern Pipe Line Company, South Peek Field, Roger Mills County, Oklahoma.	Assigned 6-1-89 to Kenneth W. Cory.
CI70-124-000, D, July 19, 1989	do	Colorado Interstate Gas Company, Higgins Field, Sweetwater County, Wyoming.	Assigned 1-1-88 to Kaiser-Francis Oil Company.
CI89-496-000 (G-3894), D, Aug. 4, 1989	ARCO Oil and Gas Company, Division of Atlantic Richfield Company, P.O. Box 2819, Dallas, TX 75221.	Tennessee Gas Pipeline Company, Mustang Island Field, Nueces County, Texas.	Assigned 12-1-88 to Bristol Resources 1987-1 Acquisition Program.
CI89-499-000 (CI77-370), D, Aug. 4, 1989	Union Oil Company of California, P.O. Box 7600, Los Angeles, CA 90051.	El Paso Natural Gas Company, Burton Flats Field, Eddy County, New Mexico.	Assigned 4-1-89 to OXY USA Inc.
CI89-508-000 (CI69-1310), D, Aug. 11, 1989.	Oryx Energy Company, P.O. Box 2880, Dallas, TX 75221-2880.	Natural Gas Pipeline Company of America, Arena Roja Field, Lea County, New Mexico.	Assigned 1-1-89 to Heafitz Energy Management, Inc.
CI89-509-000 (CI64-981), D, Aug. 11, 1989.	Oryx Energy Company	Northern Natural Gas Company, N.E. Dower Field, Lipscomb County, Texas.	Assigned 5-1-89 to Strat Lan Exploration Company.
CI89-510-000 (CI82-284-000), D, Aug. 10, 1989.	Diamond Shamrock, Offshore Partners, Limited Partnership, 717 North Harwood St., Dallas, Texas 75201.	Trunkline Gas Company, Block A-542 High Island Area, South Addition, Offshore Texas.	Assigned 6-30-89 to Hall-Houston Oil Company.
CI89-511-000 (CI82-306-002), D, Aug. 10, 1989.	Diamond Shamrock, Offshore Partners, Limited Partnership.	Trunkline Gas Company, Block A-542 High Island Area, South Addition, Offshore Texas.	Assigned 6-30-89 to Hall-Houston Oil Company.
CI89-512-000 (CI82-298-001), D, Aug. 10, 1989.	do	do	Do.
CI89-513-000 (CI89-214-000), D, Aug. 10, 1989.	do	do	Do.
CI89-514-000 (CI78-1215), D, Aug. 14, 1989.	Mobil Producing Texas & New Mexico Inc., 12450 Greenspoint Drive, Houston, TX 77060-1991.	El Paso Natural Gas Company, Angel Ranch Field, Eddy County, New Mexico.	Assigned 2-1-88 to Asher Resources.

Filing code: A—Initial Service; B—Abandonment; C—Amendment to add acreage; D—Assignment of acreage; E—Succession; F—Partial Succession.

[FR Doc. 89-20590 Filed 3-31-89; 8:45 am]

BILLING CODE 6717-01-M

ENVIRONMENTAL PROTECTION AGENCY

[OOP-100067; FRL-3638-8]

Syracuse Research Corporation; Transfer of Data

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This is a notice to certain persons who have submitted information to EPA in connection with pesticide information requirements imposed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). Syracuse Research Corporation (SRC) has been awarded a contract to perform work for the EPA Office of Environmental Criteria and Assessment and will be provided access to certain information submitted to EPA under FIFRA and the FFDCA. Some of this information may have been claimed to be confidential business information (CBI) by submitters. This information will be transferred to SRC consistent with the requirements of 40 CFR 2.307(h)(3) and 40 CFR 2.308(i)(2), respectively. This action will enable SRC to fulfill the obligations of the contract and this notice serves to notify affected persons.

DATE: Syracuse Research Corporation will be given access to this information no sooner than September 6, 1989.

FOR FURTHER INFORMATION CONTACT: By mail: Catherine S. Grimes, Program Management and Support Division (H7502C), Office of Pesticide Programs, Environmental Protection Agency, 401 M

St., SW., Washington, DC 20460. Office location and telephone number: Rm. 212 CM#2, 1921 Jefferson Davis Highway, Arlingotn, VA, (703) 557–4460.

SUPPLEMENTARY INFORMATION: This notice is to amend the list of chemicals that appeared in a **Federal Register** notice of January 13, 1988 (53 FR 794). The pesticide chemicals listed below are in addition to those mentioned in the above **Federal Register**. SRC will be preparing and updating environmental effects documents, including aquatic toxicity and environmental fate and transport. Other chemicals may be included in SRC's work later in this contract. Readers may contact the person named above in approximately 1 year to learn if chemicals other than those on this list and the original listing of January 13, 1988, will be involved in this contract. Atrazine, Carbaryl, Formaldehyde, Malathion, Methoxychlor.

The Office of Environmental Criteria and Assessment and the Office of Pesticide Programs have jointly determined that Contract No. 68–C3–3521, involves work that is being conducted in connection with FIFRA, in that pesticide chemicals will be the subject of certain evaluations to be made under this contract. These evaluations may be used in subsequent regulatory decisions under FIFRA.

Some of this information may be entitled to confidential treatment. The information has been submitted to EPA under sections 3, 6, and 7 of FIFRA and obtained under sections 408 and 409 of the FFDCA.

In accordance with the requirements of 40 CFR 2.307(h)(3) and 2.308(i)(2), the contract with SRC prohibits use of the information for any purpose other than the purposes specified in the contract, prohibits disclosure of the information in any form to a third party without prior written approval from the Agency or affected businesses, and requires that each official and employee of the contractor sign an agreement to protect the information from unauthorized release and to handle it in accordance with the FIFRA Information Security Manual. In addition, SRC has previously submitted for EPA approval a security plan under which any CBI will be secured and protected against unauthorized release or compromise. Records of information provided to this contractor will be maintained by the Project Officer for this contract in the EPA Office of Environmental Criteria and Assessment. All information supplied to SRC by EPA for use in connection with this contract will be returned to EPA when SRC has completed its work.

Dated: August 18, 1989.

Douglas D. Campt,

Director, Office of Pesticide Programs.

[FR Doc. 89–20664 Filed 8–31–89; 8:45 am]

BILLING CODE 6560–50–M

[FRL–3638–3]

Woody's Tire Fire Site: Notice of Proposed Settlement

AGENCY: Environmental Protection Agency.

ACTION: Notice of proposed settlement.

SUMMARY: Under Section 122(h) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), The Environmental Protection Agency (EPA) has agreed to settle claims for past response costs at the Woody's Tire Fire Site, Gastonia, North Carolina with Mr. Charles J. Woody. EPA will consider public comments on the proposed settlement for thirty days. EPA may withdraw from or modify the proposed settlement should such comments disclose facts or consideration which indicate the proposed settlement is inappropriate, improper or inadequate. Copies of the proposed settlement are available from: Ms. Carolyn McCall, Investigation Support Assistant, Investigation and Cost Recovery Unit, Site Investigation and Support Branch, Waste Management Division, U.S. EPA, Region IV, 345 Courtland St., NE., Atlanta, GA 30365, (404) 347–5059.

Written comments may be submitted to the person above by 30 days from date of publication.

Dated: August 22, 1989.

Patrick M. Tobin,

Director, Waste Management Division, EPA Region IV.

[FR Doc. 89–20638 Filed 8–31–89; 8:45 am]

BILLING CODE 6560–50–M

[ER–FRL–3638–7]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared August 14, 1989 through August 18, 1989 pursuant to the Environmental Review Process (ERP), under Section 309 of the Clean Air Act and section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 382–5076.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 7, 1989 (54 FR 15007).

Draft EISs

ERP No. DS–AFS–G65042–00, Rating LO, Ouachita National Forest, Amended Land and Resource Management Plan, Updated and Additional Information with emphasis on the Issue of Even-Age and Uneven-Age Management, Implementation, Garland, Logan, Hot Spring, Montgomery, Howard, Perry, Pike, Polk, Saline, Scott, Sebastian and Yell Cos., AR and Leflore and McCurtain Cos., OK

Summary: EPA has no objections to the proposed action as described.

ERP No. D–COE–B36065–MA, Rating EO2, Saugus River and Tributaries Flood Damage Reduction Plan, Implementation, Lynn, Malden, Revere and Saugus Communities, Essex, Middlesex and Suffolk Counties, MA.

Summary: EPA believes the proposed project does not comply with Section 404(b)(1) of the Clean Water Act, because the placement of fill in Lynn Harbor can be avoided. In addition, this project may not comply with EPA's antidegradation policy (40 CFR 131.12) which mandates that existing water uses and the level of water quality necessary to protect existing uses be maintained and protected. Finally, the extent of both wetland and floodplain which may be affected must be better documented.

ERP No. D–FHW–D40720–VA, Rating EO2, VA–31/James River Crossing Improvement, VA–10 to VA–5, Funding, Section 10 and 404 Permits, Coast Guard Permits, Surry, James City and Charles City Counties, VA.

Summary: EPA has rated Alternatives A, B, C, and D EO–2, due to the dredging and disposal of kepone contaminated river sediment and the high potential for secondary development. The improved ferry and No Build Alternative were rated EC–2 due to the poor level of service predicted for the ferry system and the related socio-economic impacts.

ERP No. D–FHW–G40124–OK, Rating LO, East 71st Street South Reconstruction, South Lewis Avenue to South Memorial Drive, Funding, City and County of Tulsa, OK.

Summary: EPA has no objections to the proposed action as described.

Final EISs

ERP No. F–BLM–L61158–ID, Jacks Creek Wilderness Study Areas, Wilderness Designation, Owyhee County, ID.

Summary: Review of the final EIS has been completed and the project found to be satisfactory.

ERP No. F-SWF-B65001-00, New England Atlantic Salmon Restoration Activities 1989-2021, Implementation, Connecticut, Pawcatuck, Merrimack, Saco, Union, Androscoggin, Kennebec, Penobscot, St. Croix, Meduxnekeag and Aroostook Rivers, CT, RI, MA, NH, VT and ME.

Summary: EPA has no objections to the proposed Atlantic Salmon restoration effort. EPA's concerns regarding the draft EIS have been satisfactorily resolved.

Regulations

ERP No. R-FEM-A86231-00, 44 CFR Part 206; Disaster Assistance; Robert T. Stafford Disaster Relief and Emergency Assistance Act; Implementation (54 FR 22162).

Summary: Review of the final EIS has been completed and the project found to be satisfactory.

Dated: August 29, 1989.

Richard E. Sanderson,

Director, Office of Federal Activities.

[FR Doc. 89-20675 Filed 8-31-89; 8:45 am]

BILLING CODE 6560-50-M

[ER-FRL-3836-8]

Environmental Impact Statements; Availability

Responsible Agency: Office of Federal Activities, General Information (202) 382-5076 or (202) 382-5073. Availability of Environmental Impact Statements Filed August 21, 1989 Through August 25, 1989 Pursuant to 40 CFR 1506.9.

EIS No. 890240, Final, BLM, UT, San Rafael Resource Area, Sevier River Resource Area, Forest Planning Unit and Henry Mountain Resource Area, Management Plan, Implementation, Emery, Sevier and Wayne Counties, UT, Due: October 2, 1989, Contact: Jim Dryden (801) 637-4584.

EIS No. 890241, Final, FHW, NC, East Charlotte Outer Loop Construction, US 74/ Independence Boulevard near NC-3180 to I-85 near the US 29 Connector, Funding and 404 Permit, Mecklenburg County, NC, Due: October 2, 1989, Contact: Kenneth L. Bellamy (919) 790-2859.

EIS No. 890242, Final, BOP, CO, Florence Federal Correctional Institution Complex, Construction and Operation, Fremont County, CO, Due: October 2, 1989, Contact: William J. Patrick (202) 272-6871.

EIS No. 890243, Final, MMS, MXG, LA, AL, TX, MS, Central and Western Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Lease Sales Nos. 123 and 125, Offshore AL, MS, TX, and LA, Due: October 2, 1989, Contact: Ken Havran (703) 787-1671.

Amended Notices

EIS No. 890173, Draft, AFS, ID, Valbois Destination Resort Village, Special Permit and Land Use/Resource Management Plans Amendments, Cascade Lake, Boise National Forest, Valley County, ID, Due: September 13, 1989, Contact: Greg Spangenberg (208) 364-4104. Published FR 6-30-89—Review period extended.

EIS No. 890176, Draft, AFS, WY, Threemile Area Timber Sale and Road Construction, Medicine Bow National Forest Land and Resource Management Plan, Medicine Bow National Forest, Carbon Country, WY, Due: October 15, 1989, Contact: Gary Rorvig (307) 745-8971. Published FR-7-7-89—Review period extended.

Dated: August 29, 1989.

Richard E. Sanderson,

Director, Office of Federal Activities.

[FR Doc. 89-20676 Filed 8-31-89; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

August 24, 1989.

Public Information Collection Requirement Submitted to Office of Management and Budget for Review

The Federal Communications Commission has submitted the following information collection requirement to the Office of Management and Budget for review and clearance under the Paperwork Reduction Act, as amended (44 U.S.C. 3501-3520).

Copies of the submission may be purchased from the Commission's copy contractor, International Transcription Service, (202) 857-3800, 2100 M Street NW., Suite 140, Washington, DC 20037. Persons wishing to comment on this information collection should contact Eyvette Flynn, Office of Management and Budget, Room 3235 NEOB, Washington, DC 20503, (202) 395-3785. Copies of these comments should also be sent to the Commission. For further information contact Jerry Cowden, Federal Communications Commission, (202) 632-7513.

OMB Number: 3060-0395

Title: Sections 43.21 and 43.22, Automated Reporting and Management Information System (ARMIS)

Action: Revision

Respondents: Businesses

Frequency of Response: Quarterly and annually

Estimated Annual Burden: 1,050 responses; 265,650 hours; 253 hours average burden per response

Needs and Uses: This automated reporting system is needed to administer the Commission's accounting, jurisdictional separation, access charge, and joint cost rules and to analyze revenue requirements and rates of return. It collects financial and operating data form all Tier 1 and those Class A local exchange carriers with annual revenues over $100 million.

Federal Communications Commission

Donna R. Searcy,

Secretary.

[FR Doc. 89-20567 Filed 8-31-89; 8:45 am]

BILLING CODE 6712-01-M

[GEN Docket No. 89-549; DA 89-711]

North Central and North East Texas Public Safety Plan

AGENCY: Federal Communications Commission..

ACTION: Notice.

SUMMARY: The FCC is accepting the North Central and North East Texas Area's (Region 40's) plan for public safety. By accepting this plan, the FCC enables the licensing of the 821-824/ 866-869 MHz spectrum for public safety to begin. The North Central and East Texas Region is the second of the 55 regions in the National Plan to be accepted.

EFFECTIVE DATE: July 7, 1989.

FOR FURTHER INFORMATION CONTACT: Maureen Cesaitis, Private Radio Bureau, Policy and Planning Branch, Washington, DC 20554, (202) 632-6497.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Order, adopted June 22, 1989, released July 7, 1989, accepting the North Central and North East Texas Area's Plan for Public Safety. The full text of this Commission action 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 of the Order may also be purchased from the Commission's copy contractor, International Transcription Service, (20) 857-3800, 2100 M Street, NW., Suite 140, Washington, DC 20037.

Summary of Order

The Chief, Private Radio Bureau and the Chief Engineer have accepted the regional public safety plan for the North

Central and North East Texas Region, Region 40. The Region 40 plan is the second of its kind to be accepted and it represents the culmination of the efforts of the many public safety organizations that participated in its development.

The Bureaus recognized the effort that went into preparing the Region 40 Plan and commended the Planning Committee for its work. They stated that Region 40 presented a challenge in terms of diversity and population concentration. They noted that Region 40, which includes 42 counties, is unique in that most of its population (78 percent) is concentrated in the Dallas/Fort Worth area. The Region 40 Plan represents a careful balance of the public safety and special emergency mobile communications needs throughout the area and will result in efficient use of the 800 MHz Public Safety radio spectrum.

In 1987, the Commission established policies and rules for a National Plan for public safety services to ensure that the new six megahertz of public safety spectrum (821–824/866–869 MHz) be used effectively and efficiently for important public safety functions. The Commission established 55 regions and instructed each region to develop a plan for use of the newly allocated spectrum to meet current and future mobile communications requirements of the public safety and special emergency entities operating in the area. After each plan is completed and approved by its regional planning committee, it must be submitted to the Chief, Private Radio Bureau, and the Chief Engineer. After the two Bureau Chiefs have formally accepted a plan, the individual public safety entities can begin applying for licensing in the new 800 MHz spectrum.

The Bureaus found that the Region 40 Plan conforms with the National Public Safety Plan and includes all the necessary elements specified in the 1987 Report and Order. Specifically, the plan includes a summary of the major elements of the plan, including usage guidelines, frequency reassigment, common channel implementation, encryption, use of long-range and cellular communications, application evaluation and appeal procedures. In a general description of how the spectrum is to be allotted among the various eligible users within the region, the Plan explains that the new channels have been initially assigned on a county-by-county basis, correlated to population with a minimum of two frequencies per county. The Regional Planning Committee used this approach to conserve spectrum and create more efficient frequency assignments. The Plan offers a detailed description of how the plan puts the spectrum to the best possible use by requiring system design with minimum coverage areas, by assigning frequencies so that maximum frequency reuse and offset channel use may be made and by using trunking technology.

The Bureaus noted that the seven adjacent regions, Oklahoma (34), Arkansas (4), Louisiana (18), Houston (51), Austin (49), El Paso (50), and Lubbock (52), not being as far along in their planning process, may require future coordination with Region 40. Therefore, the Bureaus accepted the Region 40 Plan subject to future coordination with its adjacent regions.

Upon release of the full text of the Order, the individual public safety entities in Region 40 may begin applying for licensing in the 821–824/866–869 MHz bands.

Action by the Chief, Private Radio Bureau and the Chief Engineer, June 22, 1989, by Order (DA 89–711).

Ordering Clauses

It is ordered that the North Central and North East Texas Area Plan for Public Safety *is accepted*, subject to amendments contained in the Order.

It is further ordered that this proceeding *is terminated.*

Federal Communications Commission.

Ralph A. Haller,

Chief, Private Radio Bureau.

Thomas P. Stanley,

Chief Engineer.

[FR Doc. 89–20566 Filed 8–31–89; 8:45 am]

BILLING CODE 6712-01-M

Report No. 1792

Petitions for Reconsideration of Actions in Rule Making Proceedings

August 28, 1989

Petitions for reconsideration have been filed in the Commission rulemaking proceeding listed in this Public Notice and published pursuant to 47 CFR 1.429(e). The full text of these documents are available for viewing and copying in Room 239, 1919 M Street, NW., Washington, DC, or may be purchased from the Commission's copy contractor International Transcription Service (202–857–3800). Oppositions to these petitions must be filed within 15 days of the date of public notice of the petitions in the **Federal Register.** See Section 1.4(b)(1) of the Commission's rules (47 CFR 1.4(b)(1)). Replies to an opposition must be filed within 10 days after the time for filing oppositions has expired.

Subject: Amendment of § 73.202(b) Table of Allotments, FM Broadcast Stations. (Charleston, South Carolina). (RM–6954) Number of Petitions Received: 1

Subject: Amendment of Parts 15 and 76 Relating to Terminal Devices Connected to Cable Television Systems. (Gen Docket No. 85–301) Number of Petitions Received: 1

Subject: Amendment of § 73.202(b) Table of Allotments, FM Broadcast Stations. (Perry, Cross City, Holiday, Avon Park, Sarasota and Live Oak, Florida; Thomasville, Georgia) (MM Docket No. 87–455, RM's 5899, 6223, 6224, 6225 and 6226) Number of Petitions Received: 1

Subject: Amendment of § 73.202(b) Table of Allotments, FM Broadcast (Tallahassee, Quincy, Perry and Gretna, Florida and Thomasville, Georgia) (MM Docket Nos. 87–486 and 87–455, RM's 5938, 5899, 6225, 6242, 6223, 6278, 6224 and 6226) Number of Petitions Received: 3

Subject: Height and Power Increases in the public Land Mobile Radio Service. (CC Docket No. 88–135) Numbers of Petitions Received: 4

Subject: Amendment of § 73.202(b) Table of Allotments, FM Broadcast Stations. (Jupiter and White City, Florida) (MM Docket No. 88–366, RM's 6260 and 6531) Number of Petitions Received: 1

Subject: Amendment of § 73.202(b) Table of Allotments, FM Broadcast Stations. (Mt. Morris and Savanna, Illinois, Belle Plaine, Maquoketa, Webster City and Winterset, Iowa) (MM Docket No. 88–369, RM's 6282, 6453 and 6580) Number of Petitions Received: 1

Federal Communications Commission.

Donna R. Searcy,

Secretary.

[FR Doc. 89–20568 Filed 8–31–89; 8:45 am]

BILLING CODE 6712-01-M

FEDERAL EMERGENCY MANAGEMENT AGENCY

[FEMA–826–DR]

Alaska; Amendment to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of Alaska (FEMA–826–DR), dated May 10, 1989, and related determinations.

DATE: August 22, 1989.

FOR FURTHER INFORMATION CONTACT: Neva K Elliott, Disaster Assistance Programs, Federal Emergency Management Agency, Washington, DC 20472 (202) 646-3614.

NOTICE: The notice of a major disaster for the State of Alaska, dated May 10, 1989, is hereby amended to include the following areas among those areas determined to have been adversely affected by the catastrophe declared a major disaster by the President in his declaration of May 10, 1989:

The communities of Chevak and Mountain Village for Public Assistance.

Grant C. Peterson,

Associate Director, State and Local Programs and Support, Federal Emergency Management Agency.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance.)

[FR Doc. 89-20645 Filed 8-31-89; 8:45 am]

BILLING CODE 6718-02-M

FEDERAL MARITIME COMMISSION

Agreement(s) Filed

The Federal Maritime Commission hereby gives notice of the filing of the following agreement(s) pursuant to section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 1100 L Street, NW., Room 10220. Interested parties may submit comments on each agreement to the Secretary, Federal Maritime Commission, Washington, DC 20573, within 10 days after the date of the **Federal Register** in which this notice appears. The requirements for comments are found in § 572.603 of Title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Agreement No.: 224-010839-004.

Title: Port of Seattle Terminal Agreement.

Parties:

Port of Seattle

American President Line, Ltd. (APL)

Synopsis: The Agreement provides for the substitution of three 20/40 foot, 50 ton capacity crane spreader beams with three new 20/40/45 foot, 50 ton capacity crane spreader beams. It also provides for the amortization of a portion of the cost differential by APL.

Agreement No.: 224-200281.

Title: City of New York Terminal Agreement.

Parties:

The City of New York Department of Ports International Trade & Commerce

Continental Terminals, Inc. (Continental)

Synopsis: The Agreement provides Continental with a ten-year lease of the 39th Street Pier and adjoining area, Brooklyn, New York, to be used for stevedoring and warehousing of cocoa and cocoa products. The Agreement provides for the payment of annual rent, wharfage and dockage fees. The Agreement may be renewed for two additional five-year periods.

By order of the Federal Maritime Commission.

Joseph C. Polking,

Secretary.

Dated: August 29, 1989.

[FR Doc. 89-20621 Filed 8-31-89; 8:45 am]

BILLING CODE 6730-01-M

Agreement(s) Filed

The Federal Maritime Commission hereby gives notice of the filing of the following agreement(s) pursuant to section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 1100 L Street NW., Room 10325. Interested parties may submit comments on each agreement to the Secretary, Federal Maritime Commission, Washington, DC 20573, within 10 days after the date of the **Federal Register** in which this notice appears. The requirements for comments are found in § 572.603 of title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Agreement No.: 203-011220-001.

Title: Bermuda Discussion Agreement.

Parties: Bermuda Container Line Ltd. Lloyd (Bermuda) Line Ltd.

Synopsis: The proposed modification would delete the requirement that each party give notice of any agreement or consensus not adhered to.

By Order of the Federal Maritime Commission.

Dated: August 28, 1989.

Joseph C. Polking,

Secretary.

[FR Doc. 89-20571 Filed 8-31-89; 8:45 am]

BILLING CODE 6730-01-M

[Docket No. 89-18]

Gulf Container Line (GCL), BV v. Port of Houston Authority Filing of Complaint and Assignment

Notice is given that a complaint filed by Gulf Container Line (GCL), B.V. ("Complainant") against Port of Houston Authority ("Respondent") was served August 28, 1989. Complainant alleges that Respondent engaged in violations of sections 10(d)(1), 10(d)(3), 10(b)(11) and 10(b)(12) of the Shipping Act of 1984, 46 U.S.C. app. 1709(d)(1), (d)(3), (b)(11), and (b)(12) in regard to its "reefer monitoring" practices at the Barbours Cut Terminal within the Port of Houston.

This proceeding has been assigned to Administrative Law Judge Charles E. Morgan ("Presiding Officer"). Hearing in this matter, if any is held, shall commence within the time limitations prescribed in 46 CFR 502.61. The hearing shall include oral testimony and cross-examination in the discretion of the Presiding Officer only upon proper showing that there are the Presiding Officer only upon proper showing that there are genuine issues of material fact that cannot be resolved on the basis of sworn statements, affidavits, depositions, or other documents or that the nature of the matter in issue is such that an oral hearing and cross-examination are necessary for the development of an adequate record. Pursuant to the further terms of 46 CFR 502.61, the initial decision of the Presiding Officer in this proceeding shall be issued by August 28, 1990, and the final decision of the Commission shall be issued by December 28, 1990.

Joseph C. Polking,

Secretary.

[FR Doc. 89-20572 Filed 8-31-89; 8:45 am]

BILLING CODE 6730-01-M

Ocean Freight Forwarder License Revocations

Notice is hereby given that the following ocean freight forwarder licenses have been revoked by the Federal Maritime Commission pursuant to section 19 of the Shipping Act of 1984 (46 U.S.C. app. 1718) and the regulations of the Commission pertaining to the licensing of ocean freight forwarders, 46 CFR 510.

License Number: 2540

Name: Almac Shipping Co. (California), Inc.

Address: 9620 LaCienega Blvd., Inglewood, CA 90301

Date Revoked: June 30, 1989

Reason: Failed to maintain a valid surety bond

License Number: 2042
Name: William L. Bliss d.b.a. OSC International
Address: P.O. Box 24525, Houston, TX 77229–4525
Date Revoked: July 14, 1989
Reason: Failed to maintain a valid surety bond

License Number: 426
Name: Ambrosio Shipping Co., Inc.
Address: 145–32–157 Street, Jamaica, NY 11434
Date Revoked: August 8, 1989
Reason: Surrendered license voluntarily

License Number: 904
Name: James E. Fox & Co., Inc.
Address: One World Trade Center, Suite 1933, New York, NY 10048
Date Revoked: August 9, 1989
Reason: Failed to maintain a valid surety bond

License Number: 2904
Name: Emarc International Freight Forwarder, Inc.
Address: 2476 So. Shore Drive, Lake Park, FL 33410
Date Revoked: August 12, 1989
Reason: Failed to maintain a valid surety bond

License Number: 2090
Name: Jerome T. Greitzer d.b.a. Greitzer Brokers
Address: 6775 Custom House Plaza, #A, San Diego, CA 92073
Date Revoked: August 14, 1989
Reason: Surrendered license voluntarily

License Number: 2511
Name: All-My Services Corp.
Address: P.O. Box 52–3434, Miami, FL 33152
Date Revoked: August 19, 1989
Reason: Failed to maintain a valid surety bond

License Number: 2426
Name: Shigehiro Uchida d.b.a. Jupiter Forwarding Company
Address: P.O. Box 6759, Torrance, CA 90504
Date Revoked: August 21, 1989
Reason: Surrendered license voluntarily

Robert G. Drew,

Director, Bureau of Domestic Regulation.

[FR Doc. 89–20570 Filed 8–31–89; 8:45 am]

BILLING CODE 6730-01-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control

Immunization Practices Advisory Committee; Meeting

In accordance with section 10(a)(2) of the Federal Advisory Committee Act (Public Law 92–463), the Centers for Disease Control (CDC) announces the following Committee meeting:

Name: Immunization Practices Advisory Committee.

Time and Date: September 26, 1989, 8:30 a.m–5 p.m.; September 27, 1989, 8:30 a.m.–1 p.m.

Place: Conference Room 207, Centers for Disease Control 1600 Clifton Road, NE., Atlanta, Georgia 30333.

Status: Open.

Purpose: The Committee is charged with advising the Director, CDC, on the appropriate uses of immunizing agents.

Matters to be Discussed: The Committee will discuss draft recommendations for statements on viral hepatitis, measles, and influenze; the National Vaccine Program; rabies; H. influenzae type b; and will consider other matters of relevance among the Committee's objectives. Agenda items are subject to change as priorities dictate.

Contact Person for More Information: Cheryl Counts, Staff Specialist, Centers for Disease Control (1–B46), 1600 Clifton Road NE., Mailstop A20, Atlanta, Georgia 30333, Telephone: FTS: 236–3851; Commercial: (404) 639–3851.

Dated: August 28, 1989.

Elvin Hilyer,

Associate Director for Policy Coordination, Centers for Disease Control.

[FR Doc. 89–20622 Filed 8–31–89; 8:45 am]

BILLING CODE 4160-18-M

Family Support Administration

Forms Submitted to the Office of Management and Budget for Clearance

The Family Support Administration (FSA) will publish on Fridays information collection packages submitted to the Office of Management and Budget (OMB) for clearance, in compliance with the Paperwork Reduction Act (44 U.S.C. Chapter 35). The following package was submited to OMB:

(For a copy of the package below, call the FSA Reports Clearance Officer on 202 252–5598.)

Request for Approval of Information Collection Requirements Contained in Regulations (P.L. 100–485) Sections 121 and 122 of the Family Support Act. The information prescribed in the information collection is used to ensure that state IV–D agencies collect and maintain information so that child support services are effectively and expeditiously provided. Respondents will be state agencies involved in child support activities.

Number of Respondents: 54, Frequency of Response: 100,374.

Average Burden per Response: 5 minutes.

Estimated Annual Burden: 461,682 hours.

OMB Desk Clearance Officer: Justin Kopca.

Written comments and recommendations for the new information collection should be sent directly to the OMB Desk Officer designated above at the following address: OMB Reports Management Branch, New Executive Office Building, Room 3201, 725 17th Street, NW., Washington, DC 20503.

Dated: August 20, 1989.

Naomi B. Marr,

Associate Administrator Office of Management and Information Systems, FSA.

[FR Doc. 89–20407 Filed 8–3–89; 8:45 am]

BILLING CODE 4150-04-M

Forms Submitted to Office of Management and Budget for Clearance

The Family Support Administration (FSA) will publish on Fridays information collection packages submitted to the Office of Management and Budget (OMB) for clearance, in compliance with the Paperwork Reduction Act (44 U.S.C. Chapter 35). Following is the package submitted to OMB since the last publication on August 25, 1989.

(Call the Reports Clearance Officer on 202–252–5598 for copies of package).

Uniform Statistical Report—FSA–104—NEW—This report is needed to meet the requirements in the Family Support Act. The information will be used to aid in the development of performance standards and to ensure that sections 402(g)(1)(A) and 402(a)(43) of the Social Security Act are being effectively implemented. Respondents: State or local governments; Number of Respondents: 51; Frequency of Response: Quarterly; Average Burden per Response: 50 hours; Estimated Annual Burden: 10,200 hours.

OMB Desk Clearance Officer: Justin Kopca.

Consideration will be given to comments and suggestions received within 60 days of publication. Written comments and recommendations for the proposed information collections should be sent directly to the appropriate OMB Desk Officer designated above at the following address: OMB Reports Management Branch, New Executive Office Building, Room 3201, 725 17th Street NW., Washington, DC 20503.

Dated: August 20, 1989.

Naomi B. Marr,

Associate Administrator, Office of Management and Information Systems.

[FR Doc. 89–20408 Filed 8–31–89; 8:45 am]

BILLING CODE 4150-04-M

Food and Drug Administration

[Docket No. 88D-0386]

Advisory Opinion and Compliance Policy Guide; Drug Product Entries in Periodic Publications; Availability

AGENCY: Food and Drug Administration.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing the availability of an advisory opinion on drug entries in *Monthly Prescribing Reference* and of Compliance Policy Guide (CPG) 7132b.17, "Drug Product Entries in Periodic Publications." The advisory opinion sets forth FDA's rationale for determining that the drug product entries in *Monthly Prescribing Reference* are not "advertisements" or "labeling" under the Federal Food, Drug, and Cosmetic Act (the act). The CPG establishes general factors FDA will use for determining whether drug product entries in periodic publications such as *Monthly Prescribing Reference* are "advertisements" or "labeling." The advisory opinion and CPG 7132b.17 do not limit the agency's enforcement discretion on whether to initiate regulatory action after an evaluation of all relevant facts.

ADDRESSES: The advisory opinion on drug entries in *Monthly Prescribing Reference* and CPG 7132b.17, "Drug Product Entries in Periodic Publications" may be ordered as one unit from National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161.

Orders must reference NTIS order number PD 89-226344 and include payment of $10.95 for a copy of the documents. Payment may be made by check, money order, charge card (American Express, Visa, or Mastercard), or billing arrangements made with NTIS. Charge card orders must include the charge card account number and expiration date. For telephone orders or further information on placing an order, call NTIS at 703-487-4650. The advisory opinion (Docket No. 86A-0246/AP) and CPG 7132b.17 are available for public examination in the Docket Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857, between 9 a.m. and 4 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Steven H. Unger, Center for Drug Evaluation and Research (HFD-362), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857-1706, 301-295-8046.

SUPPLEMENTARY INFORMATION: FDA is announcing the availability of the advisory opinion and companion CPG 7132b.17. The advisory opinion was requested on behalf of Prescribing Reference, Inc., the publisher of *Monthly Prescribing Reference*. The request was submitted to FDA under 21 CFR 10.85 of the administrative practices and procedures regulations and was assigned Docket No. 86A-0246/AP. FDA's advisory opinion sets forth the agency's rationale for determining that drug product entries in the periodic publication *Monthly Prescribing Reference* are not "labeling" under section 201(m) of the act (21 U.S.C. 321(m)) or "advertisements" under section 502(n) of the act (21 U.S.C. 352(n)). CPG 7132b.17 establishes the agency's general policy regarding the regulation of drug product entries in periodic publications intended for distribution to physicians and other health professionals.

This notice is issued under 21 CFR 10.85 and 10.90.

Dated: August 15, 1989.

Ronald G. Chesemore,

Acting Associate Commissioner for Regulatory Affairs.

[FR Doc. 89-20561 Filed 8-31-89; 8:45 am]

BILLING CODE 4160-01-M

Health Resources and Services Administration

National Advisory Committee on Rural Health

In accordance with section 10(a)(2) of the Federal Advisory Committee Act (Public Law 92-463), announcement is made of the following National Advisory body scheduled to meet during the month of September 1989:

Name: National Advisory Committee on Rural Health.

Date and Time: September 25-27, 1989, 8:30 a.m.

Place: The Columbia Inn, Wincopin Circle, Columbia, Maryland 21044.

The meeting is open to the public.

Purpose: The Committee provides advice and recommendations to the Secretary with respect to the delivery, financing, research, development and administration of health care service in rural areas.

Agenda: The meeting will include a welcome and opening remarks from the Chairman; a legislative update; a report of the National Library of Medicine's rural outreach study. The Committee will split into the three Work Groups (Health Services Delivery; Health Personnel; and Health Care Financing) for working sessions (rooms to be determined). Reports of the Work Groups' deliberations and considerations of any proposed recommendations for the Report to the Secretary. There will be brief segments for public comment, twice each day.

Persons interested in providing brief public comments should contact Ms. Arlene Granderson, Director of Operations, Office of Rural Health Policy, Health Resources and Service Administration, Room 14-22, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857, Telephone (301) 443-0835, for more specific information. Callers were asked to consider the option of preparing written statements which will be circulated to the whole Committee, or particular Work Groups if requested, prior to the meeting. Work Groups are particularly interested in receiving specific proposals for recommendations the Committee should make to the Secretary.

Anyone requiring information regarding the subject Council should contact Mr. Jeffrey Human, Executive Secretary, National Advisory Committee on Rural Health, Health Resources and Service Administration, Room 14-22, Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857, Telephone (301) 443-0835.

Agenda items are subject to change as priorities dictate.

Date: August 28, 1989.

Jackie E. Baum,

Advisory Committee Management Officer, HRSA.

[FR Doc. 89-20635 Filed 8-31-89; 8:45 am]

BILLING CODE 4160-15-M

National Institutes of Health

National Institute of Dental Research; Hearing To Obtain Comments From Organizations Regarding the NIDR "Long-Range Research Plan for the 1990s"

The National Institute of Dental Research (NIDR) has developed a draft of its "Long-Range Research Plan for the 1990s." Before the document is finalized, the NIDR will hold a hearing to obtain comments from organizations having a direct and immediate interest in the subject. The meeting will be convened on September 27, 1989, in Building 31, Conference Room 10, National Institutes of Health, Bethesda, Maryland from 9:00 a.m. to 11:45 a.m.

The meeting will be open to the public. Attendance will be limited to space available.

All organizations interested in presenting testimony should contact Dr.

James Lipton, Chief, Planning and Evaluation Section, Office of Planning, Evaluation, and Communications, NIDR, NIH, Room 2C–36, Building 31, 9000 Rockville Pike, Bethesda, MD 20892 (telephone 301/496–6705). Copies of the draft document will be made available to representatives of organizations prior to the meetings.

Dated: August 24, 1989.

William F. Raub,

Acting Director, NIH.

[FR Doc. 89–20662 Filed 8–31–89; 8:45 am]

BILLING CODE 4140–01–M

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of Administration

[Docket No. N–89–2040]

Submission of Proposed Information Collections to OMB

AGENCY: Office of Administration, HUD.

ACTION: Notices.

SUMMARY: The proposed information collection requirements described below have been submitted to the Office of Management and Budget (OMB) for review, as required by the Paperwork Reduction Act. The Department is soliciting public comment on the subject proposals.

ADDRESS: Interested persons are invited to submit comment regarding these proposals. Comments should refer to the proposal by name and should be sent to: John Allison, OMB Desk Officer, Office of Management and Budget, New Executive Office Building, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: David S. Cristy, Reports Management Officer, Department of Housing and Urban Development, 451 7th Street, Southwest, Washington, DC 20410, telephone (202) 755–6050. This is not a toll-free number. Copies of the proposed forms and other available documents submitted to OMB may be obtained from Mr. Cristy.

SUPPLEMENTARY INFORMATION: The Department has submitted the proposals for the collections of information, as described below, to OMB for review, as required by the Paperwork Reduction Act (44 U.S.C. Chapter 35).

The Notices list the following information: (1) The title of the information collection proposal; (2) the office of the agency to collect the information; (3) the description of the need for the information and its proposed use; (4) the agency form number, if applicable; (5) what members of the public will be affected by the proposal; (6) how frequently information submissions will be required; (7) an estimate of the total numbers of hours needed to prepare the information submission including number of respondents, frequency of response, and hours of response; (8) whether the proposal is new or an extention, reinstatement, or revision of an informantion collection requirement; and (9) the names and telephone numbers of an agency official familiar with the proposal and of the OMB Desk Officer for the Department.

Authority: Section 3507 of the Paperwork Reduction Act, 44 U.S.C. 3507; Section 7(d) of the Department of Housing and Urban Development Act, 42 U.S.C. 3535(d).

Dated: August 28, 1989.

David S. Cristy,

Deputy Director, Information Policy and Management Division.

Notice of Submission of Proposed Information Collection to OMB

Proposal: Conveyance (Acquisition) and Disposition Information Collections Contained in Handbook 4310.5 Entitled "Property Disposition Handbook, One-to-Four Family Properties".

Office: Housing.

Description of the Need for the Information and its Proposed Use: HUD will use the information from the forms to complete, rent, renovate, modernize, insure, or sell for cash or credit, properties in the Single Family inventory.

Form Number: HUD–9516, 9516A, 9519, 9519A, 9556, 9544, 9548.

Respondents: Individuals or Households, Businesses or Other For-Profit, and Small Businesses or Organizations.

Frequency of Submission: On Occasion.

Reporting Burden:

	Number of respondents	×	Frequency of response	×	Hours per response	=	Burden hours
HUD–9516	500		180		1		90,000
HUD–9516A	500		180		.50		45,000
HUD–9519	500		180		.50		45,000
HUD–9515A	500		360		.50		90,000
HUD–9556	200,000		1		.05		10,000
HUD–9544	100		1		.25		25
HUD–9548	15,000		10		.50		75,000

Total Estimated Burden Hours: 355,025.

Status: Extension.

Contact: Art Orton, HUD (202) 755–5740, John Allison, OMB, (202) 395–6880.

Date: August 28, 1989.

Notice of Submission of Proposed Information Collection to OMB

Proposal: Annual Contributions for Operating Subsidies—Performance Funding System; Modification to the Performance Funding System.

Office: Public and Indian Housing.

Description of the Need for the Information and its Proposed use: PHAs will be required to base their estimates of investment income on the projected Treasury Bill estimated rate and their average cash balance. A year-end adjustment to this estimate will be required to reflect the actual cash balances and Treasury Bill rate for the year.

Form Number: None.

Respondents: State or Local Governments.

Frequency of Submission: Annually.

Reporting Burden:

	Number of respondents	×	Frequency of responses	×	Hours per response	=	Burden hours
Estimating and Reporting	1,900		1		2		3,800
Recordkeeping	1,900		1		14		26,600

Total Estimated Burden Hours: 30,400.

Status: Reinstatement.

Contact: John Comerford, HUD, (202) 426–1872, John Allison, OMB, (202) 395–6880.

Date: August 28, 1989.

Notice of Submission of Proposed Information Collection to OMB

Proposal: Housing Voucher—Housing Voucher Program, Request for Lease Approval.

Office: Housing.

Description of the need for the Information and its Proposed Use: The Housing Voucher will indicate the family's responsibilities under the Housing Voucher Program. The Request for Lease Approval will be signed by the owner and the tenant and submitted to the PHA when the family finds a unit suitable for their needs. It will also be used to schedule the unit inspection.

Form Number: HUD–52646, 52517A.

Respondents: State or Local Governments.

Frequency of Submission: On Occasion.

Reporting Burden:

	Number of respondents	×	Frequency of response	×	Hours per response	=	Burden hours
HUD–52646	100,000		1		.08		8,000
HUD–52517A	300,000		1		.08		24,000

Total Estimated Burden Hours: 32,000.

Status: Reinstatement.

Contact: Gwen Carter, HUD (202) 755–6477, John Allison, OMB, (202) 395–6880.

Date: August 28, 1989.

Notice of Submission of Proposed Information Collection to OMB

Proposal: Weekly Opinion Poll of Mortgage Market Conditions.

Office: Housing.

Description of the need for the Information and its Proposed Use: HUD will use this information collection to comply with regulatory responsibilities concerning mortgage market conditions and to set maximum interest rates on certain FHA programs. The respondents are large mortgage companies.

Form Number: None.

Respondents: Businesses or Other For-Profit.

Frequency of Submission: Weekly.

Reporting Burden:

	Number of respondents	×	Frequency of response	×	Hours per response	=	Burden hours
Information Collection	30		52		.1		156

Total Estimated Burden Hours: 156.

Status: Extension.

Contact: John Dickie, HUD, (202) 755–7270, John Allison, OMB, (202) 395–6880.

Date: August 28, 1989.

[FR Doc. 89–20564 Filed 8–31–89; 8:45 am]

BILLING CODE 4210–01–M

Office of the Assistant Secretary for Housing—Federal Housing Commissioner

[Docket No. N–89–1917; FR–2606]

Unutilized and Underutilized Federal Buildings and Real Property Determined to be Suitable for Use for Facilities to Assist the Homeless

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

ACTION: Notice.

SUMMARY: This Notice identifies unutilized and underutilized Federal property determined by HUD to be suitable for possible use for facilities to assist the homeless.

EFFECTIVE DATE: September 1, 1989.

ADDRESS: For further information, contact Morris Bourne, Department of Housing and Urban Development, Room 9140, 451 Seventh Street SW, Washington, DC 20410; telephone (202) 755–9075; TDD number for the hearing- and speech-impaired (202) 426–0015. (These telephone numbers are not toll-free.)

SUPPLEMENTARY INFORMATION: In accordance with the December 12, 1988 court order in *National Coalition for the Homeless* v. *Veterans Administration*, No. 88–2503–0G (D.D.C.), HUD publishes a Notice, on a weekly basis, identifying unutilized and underutilized Federal buildings and real property determined by HUD to be suitable for use for facilities to assist the homeless. Today's Notice is for the purpose of announcing that no additional properties have been determined suitable this week.

Date: August 25, 1989.

Ronald A. Rosenfeld,

Acting Assistant Secretary for Housing—Federal Housing Commissioner.

[FR Doc. 89–20545 Filed 8–31–89; 8:45 am]

BILLING CODE 4210–27–M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Intent To Prepare an Environmental Impact Statement; Raven Management Plan, California Desert Conservation Area

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of intent.

SUMMARY: The Bureau of Land Management, in cooperation with the U.S. Fish and Wildlife Service, California Department of Fish and Game, and other agencies, will prepare an Environmental Impact Statement (EIS) reviewing alternative measures to manage ravens (*Corvus corax*) in the California Desert Conservation Area. Raven management has been proposed to reduce excessive raven predation on juvenile desert tortoises (*Xerobates Agassizzii*). The EIS will examine both lethal and nonlethal methods to control ravens in portions of the Mojave, Sonoran, and Colorado deserts of California. The goal of the management program is to increase recruitment rates of juvenile desert tortoises into adult age-classes.

Management measures that will be reviewed in the EIS include but are not limited to restricting nesting and perching sites, reducing availability of food sources, and selectively killing ravens using a combination of shooting and poisoning. The public is invited to participate in this process beginning with the identification of environmental issues.

DATE: Comments relating to the identification of environmental issues will be accepted up to 30 days from date of this publication.

ADDRESS: Send comments to the Bureau of Land Management, California Desert District Office, 1695 Spruce Street, Riverside, California 92507, Attn: Raven EIS.

FOR FUTHER INFORMATION CONTACT: Ted Rado, BLM California Desert District Office, (714) 351-6402.

SUPPLEMENTARY INFORMATION: The preliminary issues for the EIS include the following: (1) effects of raven control actions on other wildlife species; (2) identification of raven control areas; (3) measures to reduce food availability to ravens at landfills and sewage ponds; (4) means to limit raven nesting, perching, and roosting opportunities in areas of high tortoise predation; (5) mitigating program effects to other wildlife species; and (6) monitoring effectiveness of program actions. .

A public scoping meeting will be held at the Howard Johnson Lodge, 1199 University Avenue, Riverside, California, on September 15, 1989, between 10:00 a.m. and 12:00 p.m., in the Oakwood Room. No additional public meetings are planned prior to the release of the draft EIS. Both written and oral comments on the draft EIS will be accepted after its release. Notice of public meetings will be given in local papers and the Federal Register.

Dated: August 29, 1989.

Wesley T. Chambers,
Acting District Manager.

[FR Doc. 89-20714 Filed 8-31-89; 8:45 am]
BILLING CODE 4310-40-M

[CA-010-09-3110-CAPL; Casefile No. CACA 25679]

Realty Action; Exchange of Public and Private Lands in Los Angeles and San Luis Obispo Counties, CA

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Realty Action—CACA 25679.

SUMMARY: The following described lands have been determined to be suitable for disposal by exchange under Section 206 of the Federal Land Policy and Management Act of October 21, 1976 (43 USC 1716):

San Bernardino Meridian, California

T. 4 N., R. 17 W.
Sec. 2 S½ NE¼ SE¼ SE¼ SW¼
Containing 1.25 acres of public land.

In exchange for these lands, the United States will acquire an equal value of lands within the Carrizo Plain Natural Area from The Nature Conservancy, a private, nonprofit organization.

SUPPLEMENTARY INFORMATION: The purpose of this exchange is to acquire a portion of the non-federal lands within the Carrizo Plain Natural Area. This Natural Area would promote the conservation of threatened and endangered species and preserve a representative sample of the historic southern San Joaquin Valley flora and fauna.

The ultimate goal of the Bureau of Land Management is to acquire approximately 155,000 acres within the Natural Area. A secondary purpose of the exchange is to consolidate the Bureau lands and reduce the number of scattered, isolated Bureau parcels that are difficult for the Bureau to manage. The public interest will be well served by completing the exchange.

Publication of this notice in the Federal Register segregates the public lands from the operation of the public land laws and mining laws. The segregative effect will end upon issuance of patent or two years from the date of publication in the Federal Register, whichever occurs first.

After the exchange is completed, The Nature Conservancy plans to offer the former BLM land for sale to the Newhall Land and Farming Company, the surrounding landowner.

The exchange will be on an equal value basis. Acreage of the private land will be adjusted to approximate equal values. Full equalization of value will be achieved by future exchanges under a pooling agreement with The Nature Conservancy.

Land transferred from the United States will retain the following reservations:

1. A right-of-way for ditches or canals constructed by the authority of the United States under the Act of August 30, 1890 (43 USC 945).

2. All oil and gas subject to disposal under the general mineral leasing laws.

FOR FURTHER INFORMATION CONTACT: Bureau of Land Management, Caliente Resource Area Office, 4301 Rosedale Highway, Bakersfield, California 93308; (805) 861-4236.

DATE: For a period of 45 days from the date of publication of this notice in the Federal Register, interested parties may submit comments to the Area Manager, Caliente Resource Area Office, Bureau of Land Management, at the above address. Objections will be reviewed by the State Director who may sustain, vacate or modify this realty action. In the absence of any objections, this realty action will become the final determination of the Department of Interior.

Dated: August 16, 1989.

Glenn A. Carpenter,
Caliente Resource Area Manager.

[FR Doc. 89-19954 8-31-89; 8:45 am]
BILLING CODE 4310-40-M

[ID-943-09-4214-11; IDI-011898, IDI-764]

Proposed Continuation of Withdrawal; Idaho

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The U.S. Forest Service, Department of Agriculture, proposes that two withdrawals for recreation and historic sites, consisting of 270.00 acres, be continued for an additional 20 years. The lands are still being used as recreation and historic sites. These lands will remain closed to surface entry and mining, but have been and will remain open to mineral leasing.

DATES: Comments should be received on or before November 30, 1989.

FOR FURTHER INFORMATION CONTACT: Larry R. Lievsay, Idaho State Office, BLM, 3380 Americana Terrace, Boise, Idaho 83706, 208–334–1735. The U.S. Forest Service proposes that the existing land withdrawals, made by Public Land Order Nos. 3220 and 4251 for recreation and historic sites, 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, insofar as they affect the following described land:

Boise Meridian

(IDI–011898)

Jerry Johnson Hot Springs
T. 36 N., R. 13 E.
Sec. 17, SW¼SW¼NW¼
Sec. 18, NW¼NE¼SE¼, SE¼SE¼SE¼.
T. 36 N., R. 13 E.
Sec. 7, E½NE¼SE¼, SW¼NE¼SW¼, NE¼SW¼SW¼, N½SE¼SW¼, SE¼SE¼SW¼ and SW¼SW¼SE¼.
Sec. 18, W½SW¼NE¼NE¼, W½NE¼NW¼NE¼, SE¼NE¼NW¼NE¼, E½NW¼NW¼NE¼, NW¼NW¼NW¼NE¼, N½SE¼NW¼NE¼, SE¼SE¼NW¼NE¼, NW¼SE¼NE¼ and SW¼SE¼NE¼.
Colgate Warm Springs Recreation Area
T. 36 N., R. 12 E.
Sec. 15, SE¼NW¼NE¼, N½NE¼SW¼NE¼, W½SW¼NE¼NE¼ and NW¼NW¼SE¼NE¼.
Cedar Grove Campground (Devoto Memorial Cedar Grove)
T. 37 N., R. 14 E.
Sec. 22, S½NE¼NE¼NE¼, SE¼NE¼NE¼ and N½NE¼SE¼NE¼.
Powell Campground and Lochsa Public Service Site
T. 37 N., R. 14 E.
Sec. 32, NE¼NE¼ and E½NW¼NE¼.
(IDI–764)
Moose City Gravesite
T. 40 N., R. 11 E.
Sec. 29, NE¼NW¼NW¼.

The areas described aggregate 270.00 acres in Clearwater and Idaho Counties.

The withdrawals are essential for protection of substantial capital improvements on the recreation sites and historic values in the Moose City Gravesite. The withdrawals closed the lands to surface entry and mining, but not to mineral leasing. No change in the segregative effect or use of the land is proposed by this action.

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 withdrawal continuations may present their views in writing to the Idaho State Director at the above address.

The authorized officer of the Bureau of Land Management will undertake such investigations as 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 of the withdrawals will be published in the **Federal Register**. The existing withdrawals will continue until such final determination is made.

Dated: August 23, 1989.

William E. Ireland,

Chief Realty Operations Section.

[FR Doc. 89–20569 Filed 8–31–89; 8:45 am]

BILLING CODE 4310–66–M

National Park Service

North Rim Visitor Facilities Development Concept Plan; Grand Canyon National Park, Arizona; Intent to Prepare a Supplemental Environmental Impact Statement

SUMMARY: In accordance with the National Environmental Policy Act of 1969, Public Law 91–190, the National Park Service, Grand Canyon National Park, is preparing a supplemental environmental impact statement, to the 1976 Final Master Plan and Environmental Impact Statement for Grand Canyon National Park, to assess the impacts of providing additional visitor facilities at the North Rim of Grand Canyon National Park. This supplement to the 1976 Master Plan will evaluate various alternatives including no action; provision of a 100 unit lodge at the North Rim Inn campground area along with expansion of the existing campground, provison of a visitor contact center, and improvement of traffic flow and removal of parking from the immediate front of the Grand Canyon Lodge; placing the proposed lodge in the Upper Transept Canyon area with the North Rim Inn area left to overnight camping; renovation of the existing cabins in the North Rim Inn area for visitor use; and development of the proposed overnight facilities outside the park. An environmental assessment evaluating placing the new lodge in the North Rim Inn Area along with no action and Upper Transept Canyon alternatives was circulated for public review in March, 1988.

The responsible official is Stanley Albright, Regional Director, Western Regional Office. The draft supplemental environmental statement is expected to be completed and available for public review by the end of 1989, and the final supplemental environmental impact statement and Record of Decision expected to be completed from five to six months after issuance of the draft statement.

Comments on the preparation of this environmental statement are invited and should be received no later than thirty (30) days from the date of publication of this Notice in the **Federal Register**. These comments and requests for further information should be addressed to: Superintendent, Grand Canyon National Park, P.O. Box 129, Grand Canyon, AZ 86023, Telephone No. (602) 638–7888.

Dated: August 21, 1989.

Stanley T. Albright,

Regional Director, Western Region.

[FR Doc. 89–20669 Filed 8–31–89; 8:45 am]

BILLING CODE 4310–70–M

Bureau of Reclamation

Proposed Resources Management Plan for Elephant Butte and Caballo Reservoirs and Percha and Leasburg Diversion Dam Reservations, New Mexico

AGENCY: Bureau of Reclamation.

ACTION: Notice of intent to prepare a draft environmental impact statement.

SUMMARY: Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) proposes to prepare a draft environmental impact statement (DEIS) on the proposed Resources Management Plan (RMP) for Elephant Butte and Caballo Reservoirs and Percha and Leasburg Diversion Dam Reservations, New Mexico. The purpose of the proposed plan is to produce a written management document that will be used as a guide by Reclamation and other involved agency personnel in the allocation of resources and permitting appropriate uses of land and water. The plan will address: multiple uses, Reclamation's operation and maintenance on the Rio Grande below San Marcial, New Mexico, and other agency management functions as delegated through agreements with Reclamation. The DEIS will present an analysis of the impacts of various alternative management practices associated with the use of land and water resources at the four locations.

Reclamation will conduct scoping meetings via "open house" formats to inform the public about the management areas and the RMP process, and to have the public assist in scoping issues to be addressed in the RMP and the DEIS.

DATES: The scoping meetings will be held on September 18, 19, 20, and 21, 1989.

ADDRESSES: The scoping meeting open houses will be held at the following four locations and times:

September 18, 5:00 p.m. to 8:00 p.m., El Paso Center—Juarez Room, One Civic Center Plaza, El Paso, Texas;

September 19, 5:00 p.m. to 8:00 p.m., Corbett Center, New Mexico State University, Las Cruces, New Mexico;

September 20, 5:00 p.m. to 8:00 p.m., Truth or Consequences Convention Center, corner of McAdoo and Daniels, Truth or Consequences, New Mexico;

September 21, 5:00 p.m. to 8:00 p.m., Tampico-Cozumel Room, Holiday Inn, San Francisco Road NE., Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: Mr. Tom Shrader, Chief, Land and Environmental Branch, Rio Grande Project, U.S. Bureau of Reclamation, Federal Building (B–316), 700 East San Antonio, El Paso, Texas 79901; Telephone: (915) 534–6316; or Mr. Harold Sersland, Upper Colorado Regional Environmental Officer, U.S. Bureau of Reclamation, 125 South State Street, Salt Lake City, Utah 84138, Telephone: (801) 524–5580.

SUPPLEMENTARY INFORMATION: Reclamation has three NEPA documents that address operation and maintenance activities on the Rio Grande in New Mexico. The documents are: (1) 1977 Final Environmental Impact Statement, Operation and Maintenance Program for the Rio Grande—Velarde to Caballo Dam—Rio Grande and Middle Rio Grande Projects; (2) 1982 Final Environmental Assessment and Finding of No Significant Impact, Rio Grande Conveyance Rehabilitation, Operation and Maintenance Program, Elephant Butte Reservoir, New Mexico; and (3) 1985 Final Environmental Assessment and Finding of No Significant Impact, Rio Grande Channel Restoration, Operation and Maintenance Program, Elephant Butte Dam to Caballo Reservoir, Sierra County, New Mexico.

After the scoping meetings, the public will have an additional opportunity to comment individually and/or through a focus group composed or representatives of principal users and interest groups.

Anyone interested in more information concerning the study or who has suggestions as to significant environmental issues should contact Mr. Shrader or Mr. Sersland at the above addresses.

The DEIS is expected to be completed and available for review and comment by the end of 1991.

Dated: August 28, 1989.

Joe D. Hall,

Deputy Commissioner.

[FR Doc. 89–20623 Filed 8–31–89; 8:45 am]

BILLING CODE 4310–09–M

DEPARTMENT OF LABOR

Office of the Secretary

Agency Recordkeeping/Reporting Requirements Under Review by the Office of Management and Budget (OMB)

Background: The Department of Labor, in carrying out its responsibilities under the Paperwork Reduction Act (44 U.S.C. Chapter 35), considers comments on the reporting and recordkeeping requirements that will affect the public.

List of Recordkeeping/Reporting Requirements Under Review: As necessary, the Department of Labor will publish a list of the Agency recordkeeping/reporting requirements under review by the Office of Management and Budget (OMB) since the last list was published. The list will have all entries grouped into new collections, revisions, extensions, or reinstatements. The Departmental Clearance Officer will, upon request, be able to advise members of the public of the nature of the particular submission they are interested in.

Each entry may contain the following information:

The Agency of the Department issuing this recordkeeping/reporting requirement.

The title of the recordkeeping/reporting requirement.

The OMB and Agency identification numbers, if applicable.

How often the recordkeeping/reporting requirement is needed.

Who will be required to or asked to report or keep records.

Whether small businesses or organizations are affected.

An estimate of the total number of hours needed to comply with the recordkeeping/reporting requirements and the average hours per respondent.

The number of forms in the request for approval, if applicable.

An abstract describing the need for and uses of the information collection.

Comments and Questions: Copies of the recordkeeping/reporting requirements may be obtained by calling the Departmental Clearance Officer, Paul E. Larson, telephone (202) 523–6331. Comments and questions about the items on the list should be directed to Mr. Larson, Office of Information Management, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–1301, Washington, DC 20210. Comments should also be sent to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for (BLS/DM/ESA/ETA/OLMS/MSHA/OSHA/PWBA/VETS), Office of Management and Budget, Room 3208, Washington, DC 20503 (Telephone (202) 395–6880).

Any member of the public who wants to comment on a recordkeeping/reporting requirement which has been submitted to OMB should advise Mr. Larson of this intent at the earliest possible date.

New Collection

Bureau of Labor Statistics
Survey of displaced workers
CPS 1
Other—one-time survey, to be conducted as a special supplement to the January 1990 Current Population Survey.
Individuals or households
Survey universe is 57,000 household;
Respondents burden is estimated at approximately 1,450 hours;
Supplement will utilize available space on regular CPS questionnaire.

The Current Population Survey (CPS) is the monthly household survey that provides the basis data on the labor force, total employment, and unemployment. The special CPS supplement on displaced workers, proposed for January 1990, would provide data on the persons who lost jobs over the 1985–89 period due to plant closing, companies going out of business, or layoffs from which they were not recalled. A similar survey was conducted in January 1988 (1220–0104).

Extension

Employment Standards Administration
OFCCP Complaint Form
1215–0131; CC–4
On occasion
Individuals or households; 1,750 respondents; 2,030 total hours; 1.16 hrs. per response; 1 form.

These complaint forms are prepared by individuals who allege illegal discrimination by federal contractors under any of the three programs administered by OFCCP. These forms are received by OFCCP, reviewed for coverage, and where appropriate, assigned for investigation.

Extension

Employment and Training Administration

Quarterly Narrative Reports for Test Development Program
1205–0220
Quarterly
20 Respondents; 128 total hours; 1–5 hrs per respondent; no forms.

The Employment Service Reimbursable Grant, pursuant to Section 7(c) of the Wagner-Peyser Act, as amended, is one overall grant to the States to fund special responsibilities of the Secretary of Labor not specifically authorized under Sections 7 (a) & (b) of the Act, such as Test Development.

Signed at Washington, DC this 25th day of August, 1989.

Theresa O'Malley,

Acting Departmental Clearance Officer.

[FR Doc. 89–20656 Filed 8–31–89; 8:45 am]

BILLING CODE 4510–24–M

Employment Standards Administration, Wage and Hour Division

Minimum Wages for Federal and Federally Assisted Construction; General Wage Determination Decisions

General wage determination decisions of the Secretary of Labor are issued in accordance with applicable law and are based on the information obtained by the Department of Labor from its study of local wage conditions and data made available from other sources. They specify hourly wage rates and fringe benefits which are determined to be prevailing for the described classes of laborers and mechanics employed on construction projects of a similar character and in the localities specified therein.

The determinations in these decisions of prevailing rates and fringe benefits have been made in accordance with 29 CFR part 1, by authority of the Secretary of Labor pursuant to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Stat. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in 29 CFR part 1, Appendix, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act. The prevailing rates and fringe benefits determined in these decisions shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted constructon projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

Good cause is hereby found for not utilizing notice and public comment procedure thereon prior to the issuance of these determinations as prescribed in 5 U.S.C. 553 and not providing for delay in the effective date as prescribed in that section, because the necessity to issue current construction industry wage determinations frequently and in large volume causes procedures to be impractical and contrary to the public interest.

General wage determination decisions, and modifications and supersedeas decisions thereto, contain no expiration dates and are effective from their date of notice in the **Federal Register**, or on the date written notice is received by the agency, whichever is earlier. These decisions are to be used in accordance with the provisions of 29 CFR parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable Federal prevailing wage law and 29 CFR part 5. The wage rates and fringe benefits, notice of which is published herein, and which are contained in the Government Printing Office (GPO) document entitled "General Wage Determinations Issued Under the Davis-Bacon and Related Acts," shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

Any person, organization, or governmental agency having an interest in the rates determined as prevailing is encouraged to submit wage rate and fringe benefit information for consideration by the Department. Further information and self-explanatory forms for the purpose of submitting this data may be obtained by writing to the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division, Division of Wage Determinations, 200 Constitution Avenue NW., Room S–3504, Washington, DC 20210.

New General Wage Determinations Decisions

The numbers of the decisions added to the Government Printing Office document entitled "General Wage Determinations Issued Under the Davis-Bacon and Related Acts" are listed by Volume, State, and page number(s).

Volume I:

MD89–22, VA89–57, VA89–58, VA89–59, VA89–61, VA89–63, VA89–65

Volume II:

LA89–8, OH–34

Modifications to General Wage Determination Decisions

The numbers of the decisions listed in the Government Printing Office document entitled "General Wage Determinations Issued Under the Davis-Bacon and Related Acts" being modified are listed by Volume, State, and page number(s). Dates of publication in the **Federal Register** are in parentheses following the decisions being modified.

Volume I

District of Columbia, DC89–2 (Jan. 6, 1989)	p. 77. pp. 78–82.
Maryland:	
MD89–3 (Jan. 6, 1989)	p. 421. p. 422.
MD89–22 (Jan. 6, 1989)	p. 456i. pp. 456i–465j.
New York:	
NY89–4 (Jan. 6, 1989)	p. 709. p. 712.
NY89–5 (Jan. 6, 1989)	p. 717. p. 719.
NY89–10 (Jan. 6, 1989)	p. 769. p. 771.
NY89–11 (Jan. 6, 1989)	p. 781. pp. 782–783.
NY89–12 (Jan. 6, 1989)	p. 789. pp. 791–792.
NY89–15 (Jan. 6, 1989)	p. 811. pp. 812–813.
NY89–19 (Jan. 6, 1989)	p. 836c. pp. 836c–836h.
Virginia:	
VA89–5 (Jan. 6, 1989)	p. 1133. pp. 1134–1136.
VA89–12 (Jan. 6, 1989)	p. 1153. p. 1154.
VA89–15 (Jan. 6, 1989)	p. 1163. p. 1164.
VA89–25 (Jan. 6, 1989)	p. 1188a. p. 1188b.
VA89–27 (Jan. 6, 1989)	p. 1188g. p. 1188h.
VA89–28 (Jan. 6, 1989)	p. 1188i. p. 1188j.
VA89–29 (Jan. 6, 1989)	p. 1188k. p. 1188l.
VA89–44 (Jan. 6, 1989)	p. 1188qq. p. 1188rr.
VA89–46 (Jan. 6, 1989)	p. 1188uu. p. 1188vv.
VA89–47 (Jan. 6, 1989)	p. 1188ww. p. 1188xx.
VA89–50 (Jan. 6, 1989)	p. 1188ccc. p. 1188ddd.
VA89–51 (Jan. 6, 1989)	p. 1188eee. p. 1188fff.
VA89–55 (Jan. 6, 1989)	p. 1188mmm. p. 1188nnn.
VA89–57 (Jan. 6, 1989)	p. 1188sss. p. 1188ttt.
VA89–58 (Jan. 6, 1989)	p. 1188uuu. p. 1188vvv.
VA89–59 (Jan. 6, 1989)	p. 1188www. p. 1188xxx.

VA89-61 (Jan. 6, 1989)	p. 1188yyy.
	p. 1188zzz.
	p. 1188zzz-1.
	p. 1188zzz-2.
VA89-63 (Jan. 6, 1989)	p. 1188zzz-3.
	p. 1188zzz-4.
VA89-65 (Jan. 6, 1989)	p. 1188zzz-5.
	p. 1188zzz-6.
Volume II	
Iowa, IA89-6 (Jan. 6, 1989)	p. 51.
	pp. 52-54.
Louisiana:	
LA89-5 (Jan. 6, 1989)	p. 397.
	p. 398.
LA89-8 (Jan. 6, 1989)	p. 426a.
	p. 426a-426b.
Minnesota:	
MN89-7 (Jan. 6, 1989)	p. 567.
	pp. 568-586.
MN89-15 (Jan. 6, 1989)	p. 617.
	pp. 618-626b.
New Mexico, NM89-1 (Jan. 6, 1989)	p. 743.
	pp. 744-760.
Ohio, OH89-34 (Jan. 6, 1989)	p. 912a.
	pp. 912a-912b.
Wisconsin:	
WI89-7 (Jan. 6, 1989)	p. 1161.
	p. 1162.
WI89-8 (Jan. 6, 1989)	p. 1165.
	pp. 1166-1167.
	pp. 1170-1171.
	pp. 1176-1177.
WI89-10 (Jan. 6, 1989)	p. 1187.
	pp. 1188-1194.
Volume III	
Washington:	
WA89-1 (Jan. 6, 1989)	p. 363.
	pp. 364-369.
	pp. 373-374.
	pp. 376-377.
WA89-2 (Jan. 6, 1989)	p. 389.
	pp. 390-391.
	pp. 394-395.
WA89-3 (Jan. 6, 1989)	p. 401.
	pp. 402-408.
WA89-7 (Jan. 6, 1989)	p. 417.
	p. 418.

General Wage Determination Publication

General wage determinations issued under the Davis-Bacon and related Acts, including those noted above, may be found in the Government Printing Office (GPO) document entitled "General Wage Determinations Issued Under The Davis-Bacon And Related Acts". This publication is available at each of the 50 Regional Government Depository Libraries and many of the 1,400 Government Depository Libraries across the country. Subscriptions may be purchased from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

When ordering subscription(s), be sure to specify the State(s) of interest, since subscriptions may be ordered for any or all of the three separate volumes, arranged by State. Subscriptions include an annual edition (issued on or about January (1) which includes all current general wage determinations for the States covered by each volume. Throughout the remainder of the year, regular weekly updates will be distributed to subscribers.

Signed at Washington, DC this 25th day of August 1989.

Robert V. Setera,

Acting Director, Division of Wage Determinations.

[FR Doc. 89-20636 Filed 8-31-89; 8:45 am]

BILLING CODE 4510-27-M

Employment and Training Administration

Investigations Regarding Certifications of Eligibility To Apply for Worker Adjustment Assistance

Petitions have been filed with the Secretary of Labor under section 211(a) of the Trade Act of 1974 ("the Act") and are identified in the Appendix to this notice. Upon receipt of these petitions, the Director of the Office of Trade Adjustment Assistance, Employment and Training Administration, has instituted investigations pursuant to section 221(a) of the Act.

The purpose of each of the investigations is to determine whether the workers are eligible to apply for adjustment assistance under Title II, Chapter 2, of the Act. The investigations will further relate, as appropriate, to the determination of the date on which total or partial separations began or threatened to begin and the subdivision of the firm involved.

The petitioners or any other persons showing a substantial interest in the subject matter of the investigations may request a public hearing, provided such request is filed in writing with the Director, Office of Trade Adjustment Assistance, at the address shown below, not later than September 11, 1989.

Interested persons are invited to submit written comments regarding the subject matter of the investigations to the Director, Office of Trade Adjustment Assistance, at the address shown below not later than (10 days after public). September 11, 1989.

The petitions filed in this case are available for inspection at the Office of the Director, Office of Trade Adjustment Assistance, Employment and Training Administration, U.S. Department of Labor, 601 D Street, NW., Washington, DC 20213.

Signed at Washington, DC, this 21st day of August 1989.

Marvin M. Fooks,

Director, Office of Trade Adjustment Assistance.

APPENDIX

Petitioner (Union/Workers/Firm)	Location	Date received	Date of petition	Petition No.	Articles produced
Alsten Co., Inc. (Workers)	Jersey City, NJ	8/21/89	7/11/89	23,283	Jewelry Boxes.
Calgon Corp. (OCAWIU)	Hawthorne, NJ	8/21/89	8/8/89	23,284	Chemicals.
Celsius Energy Co. (Workers)	Salt Lake City, UT	8/21/89	7/30/89	23,285	Oil & Gas.
Circuline Fabrics, Inc. (Company)	Brooklyn, NY	8/21/89	8/5/89	23,286	Men's & Ladies' Sweaters.
Drilling Mud Disposal (Workers)	Midland, TX	8/21/89	8/11/89	23,287	Mud Collectors.
Electro-Design (UAW)	Ferndale, MI	8/21/89	8/8/89	23,288	Wire Harness.
G.E. Lighting (Workers)	Troy, MI	8/21/89	8/9/89	23,289	Light Bulbs.
GNB/Pacific Dunlop (IBEW)	Dunmore, PA	8/21/89	8/10/89	23,290	Batteries.
General Electric, Co., Motor Business Dept. (UE)	Decatur, IN	8/21/89	8/9/89	23,291	Fractional Motors.
Grant Oil Tubular Corp. (Company)	Houston, TX	8/21/89	8/3/89	23,292	Steel Pipes.
Harris Graphics Corp. (IAMAW)	Pawcatuck, CT	8/21/89	8/7/89	23,293	Printing Presses
Knapp Shoe (Barber Div.) (Workers)	Lewiston, ME	8/21/89	8/9/89	23,294	Boots & Shoes.

APPENDIX—Continued

Petitioner (Union/Workers/Firm)	Location	Date received	Date of petition	Petition No.	Articles produced
Mobil Exploration & Producing Houston Div. (Workers).	Houston, TX	8/21/89	8/8/89	23,295	Oil & Gas.
Niki-Lu (Workers)	Hialeah, FL	8/21/89	8/9/89	23,296	Ladies' Sportswear.
Ottenheimer & Co. (Workers)	Vichy, MO	8/21/89	8/8/89	23,297	Lab Uniforms.
PPG Industries, Inc. Glass Research Center (Workers).	Pittsburgh, PA	8/21/89	8/8/89	23,298	Glass.
Pony Industries, Inc. (Workers)	Miami, FL	8/21/89	8/7/89	23,299	Aluminum Extrusions.
Sharidge, Inc. (Workers)	Ira, TX	8/21/89	8/8/89	23,300	Oil & Gas.
Sherwood Medical Co. (Workers)	Tucson, AZ	8/21/89	8/14/89	23,301	Medical Products.
Teledyne Exploration (Company and Workers)	Metairie, LA	8/21/89	7/28/89	23,302	Oil & Gas.
Teledyne Exploration (Company and Workers)	Houston, TX	8/21/89	7/28/89	23,303	Oil & Gas.
Texas Eastern Corp. (Company)	Houston, TX	8/21/89	8/7/89	23,304	Oil & Gas.

[FR Doc. 89-20654 Filed 8-31-89; 8:45 am]
BILLING CODE 4510-30-M

[TA-W-22,584]

Kellwood Company Lonoke, AR; Dismissal of Application for Reconsideration

Pursuant to 29 CFR 90.18 an application for administrative reconsideration was filed with the Director of the Office of Trade Adjustment Assistance for workers at Kellwood Company, Lonoke, Arkansas. The review indicated that the application contained no new substantial information which would bear importantly on the Department's determination. Therefore, dismissal of the application was issued.

TA-W-22,584; Kellwood Company, Lonoke, Arkansas (August 21, 1989)

Signed at Washington, DC, this 24th day of August 1989.

Marvin M. Fooks,

Director, Office of Trade Adjustment Assistance.

[FR Doc. 89-20653 Filed 8-31-89; 8:45 am]
BILLING CODE 4510-30-M

Mine Safety and Health Administration

[Docket No. M-89-123-C]

Chapperal Coal Corp.; Petition for Modification of Application of Mandatory Safety Standard

Chapperal Coal Corporation, 441 Marion Branch Road, Pikeville, Kentucky 41501, has filed a petition to modify the application of 30 CFR 75.1103-4(a) (automatic fire sensor and warning device systems; installation; minimum requirements) to its No. 2 Mine (I.D. No. 15-08256) located in Pike County, Kentucky. The petition is filed under section 101(c) of the Federal Mine Safety and Health Act of 1977.

A summary of the petitioner's statements follows:

1. The petition concerns the requirement that automatic fire sensor and warning device systems provide identification of a fire within each belt flight.

2. As an alternate method, petitioner proposes to install a carbon monoxide (CO) system in lieu of a point-type system. The CO system would provide identification of a fire within an area rather than within each belt flight.

3. In support of this request petitioner states that—

(a) A CO sensor would be installed at every belt drive and at intervals not to exceed 2,000 feet along the belts. The CO sensors would be capable of giving an early warning of a fire automatically. An audible an visual signal would be activated should the CO concentration reach 10 parts per million (ppm) above ambient level;

(b) The CO systems would upon activation provide an effective warning signal at a manned location on the surface where there is two-way communication. The CO sensor would be capable of identifying any activated sensor. All persons, except those required to investigate and take appropriate action in the event of a fire in the belt entry, would be immediately withdrawn to a safe area;

(c) If the CO system is affected by a power interruption or other malfunction, the belt conveyors would continue to operate only if a qualified person would monitor for CO with a suitable instrument at each section loading point in the malfunctioning sensor;

(d) Each CO sensor would be visually examined at least once each week during production periods to ensure proper functioning. The monitoring system would be calibrated with known concentrations of CO and gas every six weeks; and

(e) The primary intake would be separated from the belt conveyor entry with permanent stoppings.

4. Petitioner states that the proposed alternate method will provide the same degree of safety for the miners affected as that afforded by the standard.

Request for Comments

Persons interested in this petition may furnish written comments. These comments must be filed with the Office of Standards, Regulations and Variances, Mine Safety and Health Administration, Room 627, 4015 Wilson Boulevard, Arlington, Virginia 22203. All comments must be postmarked or received in that office on or before October 2, 1989. Copies of the petition are available for inspection at that address.

Dated: August 24, 1989.

Patricia W. Silvey,

Director, Office of Standards, Regulations and Variances.

[FR Doc. 89-20655 Filed 8-31-89; 8:45 am]
BILLING CODE 4510-43-M

Pension and Welfare Benefits Administration

Advisory Council on Employee Welfare and Pension Benefits Plans; Work Group Meeting

Pursuant to the authority contained in Section 512 of the Employee Retirement Income Security act of 1974 (ERISA), 29 U.S.C. 1142, a public meeting of the Work Group on Pension Portability of the Advisory Council on Employee Welfare and Pension Benefit Plans will be held at 9:30 a.m., Friday, September 22, 1989, In Room N-3437, U.S. Department of Labor Building, Third and Contitution Avenue, NW., Washington, DC 20210.

This eight member group was formed by the Advisory Council to study issues relating to Pension Portability for employee welfare plans covered by ERISA.

Since enactment of ERISA in 1974, a viable resolution has not been found to the issue of short fall in pension entitlement from private sector defined Benefit Plans, due to breaks in employment throughout the normal working career. The lack of a workable "portability" concept to tie together deferred vested benefits and non-vested periods of service erodes ultimate retirement income for millions of employees who have worked an entire career for a series of employers in the same industry or different industries.

The purpose of the Pension Portability Work Group is to evaluate the alternatives to resolving this gap in the evolving National Retirment Income Policy and report its findings to the full ERISA Advisory Council.

The agenda for the first meeting will include the following:

I. Introduction of Work Group members
II. Chairperson's Opening Remarks
III. Discussion of Prior Portability Studies in Recent Proposed Legislation, and Current Administration Position on Issue
IV. Discussion of Scope of Study and Time Schedule of Findings
V. Establishing Dates of Future Meetings
VI. Public Witnesses Testimony
VII. Ajournment

The work group will also take testimony and or submissions from employee representatives, employer representatives and other interested individuals and groups regarding the subject matter.

Individuals, or representatives of organizations, wishing to address the work group should submit written requests on or before September 20, 1989 to William E. Morrow, Executive Secretary, ERISA Advisory Council, U.S. Department of Labor, Suite N-5677, 200 Constitution Avenue, NW., Washington, DC 20210. oral presentations wil be limited to ten minutes, but witnesses may submit an extended statement for the record.

Organizations or individuals may also submit statements for the record without testifying. Twenty (20) copies of such statements should be sent to the Executive Secretary of the Advisory Council at the above address. Papers will be accepted and included in the record of the meeting if received on or before September 20, 1989.

Signed at Washington, DC this 28th day of August, 1989.

William E. Morrow,

Executive Secretary ERISA Advisory Council.

[FR Doc. 89-20652 Filed 8-31-89; 8:45am]

BILLING CODE 4510-29-M

LIBRARY OF CONGRESS

National Film Preservation Board; Public Meeting

AGENCY: Library of Congress, National Film Preservation Board.

ACTION: Notice of public meeting.

This notice is issued pursuant to Public Law 100-446, The National Film Preservation Act of 1988, 2 U.S.C. 178, by Dr. James H. Billington, the Librarian of Congress, to inform the public that the next meeting of the National Film Preservation Board will be held in Washington, DC at the Library of Congress on September 26, 1989 at 2 p.m. in the Jefferson Building, Whittall Pavilion (ground floor). The building is located at the corner of Independence Avenue and First Street, SE.

FOR FURTHER INFORMATION CONTACT: Eric Schwartz, Counsel, The National Film Preservation Board, Library of Congress, Washington, DC 20540. Telephone: (202) 707-8350.

Dated: August 28, 1989.
Approved by:

James H. Billington,

The Librarian of Congress.

[FR Doc. 89-20671 Filed 8-31-89; 8:45 am]

BILLING CODE 1410-01-M

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (89-59)]

NASA Advisory Council (NAC), Space Science and Applications Advisory Committee (SSAAC), Life Sciences Subcommittee; Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92-463, as amended, the National Aeronautics and Space Administration announces a forthcoming meeting of the NASA Advisory Council, Space Science and Applications Advisory Committee, Life Sciences Subcommittee.

DATES: September 18, 1989, 9 a.m. to 5:15 p.m.; September 19, 1989, 8:30 a.m. to 2 p.m.

ADDRESSES: Holiday Inn Capitol, Lewis Room, 550 C Street SW, Washington, DC 20024.

FOR FURTHER INFORMATION CONTACT: Dr. Ronald J. White, Code EB, National Aeronautics and Space Administration, Washington, DC 20546 (202/453-1470).

SUPPLEMENTARY INFORMATION: The Space Science and Applications Advisory Committee consults with and advises the NASA Office of Space Science and Applications (OSSA) on long range plans for, work in progress on, and accomplishments of NASA's Space Science and Applications programs. The Life Sciences Subcommittee provides advice to the Life Sciences Division concerning all of its programs in the space life sciences. The Subcommittee will meet to discuss the Life Sciences budget status, issues, implications for strategic planning, and activities of the SSAAC and the Aerospace Medicine Advisory Committee (AMAC). The Subcommittee is chaired by Dr. Francis J. Haddy and is composed of 17 members. The meeting will be closed on Tuesday, September 19, from 10:30 a.m. to 11:45 a.m. to discuss and evaluate qualifications of candidates being considered for membership on the Subcommittee. Such discussions would invade the privacy of the individuals involved. Since this session will be concerned with matters listed in 5 U.S.C. 552(c)(6), it has been determined that the meeting will be closed to the public for this period of time. The remainder of the meeting will be open to the public up to the capacity of the room (approximately 45 including Subcommittee members).

Type of Meeting: Open—except for a closed session as noted in the agenda below.

Agenda:

Monday, September 18.

9 a.m.—Introduction and Chairman's Remarks.

9:15 a.m.—NASA and OSSA Status and Implications for Life Sciences.

10:15 a.m.—Life Sciences Budget Status, Issues, and Implications for Strategic Planning.

1:30 p.m.—Activities of the Space Science and Applications Advisory Committee (SSAAC) and the Aerospace Medicine Advisory Committee (AMAC).

2:15 p.m.—Life Sciences Division Reports.

5:15 p.m.—Adjourn.

Tuesday, September 19.

8:30 a.m.—Discussion of Committee Tasks and Functions.

10:30 a.m.—Closed Session.

1 p.m.—Committee Strategy and Actions.

2 p.m.—Adjourn.

Dated: August 25, 1989.

John W. Gaff,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 89-20624 Filed 8-31-89; 8:45 am]

BILLING CODE 7510-01-M

NATIONAL SCIENCE FOUNDATION

Meeting

Name: Committee on Equal Opportunties in Science and Engineering.

Place: National Science Foundation, 1800 G Street, NW., Washington, DC 20550.

Dates: October 18, 19, 20, 1989.

Times/Rooms: October 18: Subcommittee on Persons with Disabilities 9:00 a.m.—12:00 p.m., Room 540.

October 18: Subcommittee on Minorities 1:30 p.m.—4:30 p.m., Room 540.

October 19: Full Committee Meeting 9:00 a.m.—5:00 p.m., Room 540.

October 20: Subcommittee on Women 9:00 a.m.—12:00 p.m.

Type of Meeting: Open.

Contact: Mary M. Kohlerman, Executive Secretary of the CEOSE, National Science Foundation, Room 635. Telephone Number: 202–357–7066.

Purpose of Meeting: To provide advice to the Foundation on policies and activities to encourage full participation of groups currently underrepresented in scientific, engineering, professional and technical fields.

Minutes: May be obtained from the Executive Secretary at the above address.

Agenda: To review progress by the subcommittees, become familiar with successful intervention programs, and to meet with the Director and other NSF staff.

M. Rebecca Winkler,

Committee Management Officer.

8–29–89

[FR Doc. 89–20684 Filed 8–31–89; 8:45 am]

BILLING CODE 7555–01–M

Instructional Materials Development Panel Meeting

The National Science Foundation announces the following meeting:

Name: Instructional Materials Development Panel Meeting.

Date and Time: September 22, 1989, from 8:30 a.m. to 5:00 p.m.

Place: National Science Foundation, 1800 G. St. NW., Washington, DC 20550. Room #1242.

Type of Meeting: Closed Meeting.

Contact Person: Alice J. Moses, National Science Foundation, 1800 G. St. NW., Washington, DC 20550, Instructional Materials Development, Room 635–A Phone (202) 357–7066.

Minutes: May be obtained from the Contract persons at the above address.

Purpose of Meeting: To attend Instructional Materials Development Panel and provide advice and recommendations concerning K–12 Math. Science and Technology education.

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 propriety confidential including 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: August 29, 1989.

M. Rebecca Winkler,

Committee Management Office.

[FR Doc. 89–20625 Filed 8–31–89; 8:45 am]

BILLING CODE 7555–01–M

NUCLEAR REGULATORY COMMISSION

Individual Plant Examination

AGENCY: Nuclear Regulatory Commission.

ACTION: Initation of the Individual Plant Examination for Severe Accident Vulnerabilities.

SUMMARY: This notice announces the availability of NUREG–1335, "Individual Plant Examination: Submittal Guidance," and initiation of the Individual Plant Examination (IPE) process. In accordance with Generic Letter No. 88–20, licensees are requested to submit within 60 days of this notice, their proposed programs for completing their IPEs. The proposed programs should be submitted to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, DC 20555 and should:

1. Identify the method and approach selected for performing the IPE,

2. Describe the method to be used, if it has not been previously submitted for staff review (the description may be referenced), and

3. Identify the milestones and schedules for performing the IPE and submitting the results to the NRC.

A copy of the IPE submittal guidance (NUREG–1335) is available for inspection and/or copying in the NRC Public Document Room, 2120 L Street NW., Lower Level of the Gelman Building, Washington, DC.

FOR FURTHER INFORMATION CONTACT: John H. Flack, Office of Nuclear Regularory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone (301) 492–3979.

Dated in Rockville, Maryland this 28th day of August, 1989.

For the Nuclear Regulatory Commission.

R. Wayne Houston,

Director, Division of Safety Issue Resolution, Office of Nuclear Regulatory Research.

[FR Doc. 89–20648 Filed 8–31–89; 8:45 am]

BILLING CODE 7590–01–M

[Docket No. 030–07099]

The Applied Radiant Energy Corp.; Issuance of Director's Decision Under 10 CFR Section 2.206

[License No. 45–11496–01]

Notice is hereby given that the Director, Office of Nuclear Material Safety and Safeguards, has taken action with regard to a Petition for action under 10 CFR 2.206 received from Ms. Kristen Albrecht, Research Coordinator, National Coalition to Stop Food Irradiation, dated March 23, 1989, with respect to The Applied Radiant Energy Corporation (ARECO). The Petitioner requested that a proceeding be instituted to suspend the use of cesium-137 sealed sources at the ARECO facility.

The Director of the Office of Nuclear Material Safety and Safeguards has determined to deny the Petition. The reasons for this denial are explained in the "Director's Decision under 10 CFR 2.206," (DD–89–6) which is available for public inspection in the Commission's Public Document Room, 2120 L Street (Lower Level), NW., Washington, DC 20555. A copy of this decision will be filed with the Secretary for the Commission's review in accordance with 10 CFR Section 2.206(c) of the Commission's regulations. As provided by this regulation, the Decision will constitute the final action of the Commission twenty-five (25) days after the date of issuance of the decision unless the Commission on its own motion institutes a review of the decision within that time.

Dated at Rockville, Maryland this 24th day of August, 1989.

For the Nuclear Regulatory Commission.

Guy A. Arlotto,

Deputy Director, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 89–20649 Filed 8–31–89; 8:45 am]

BILLING CODE 7590–01–M

[Docket No. 50-353]

Limerick Generating Station, Unit No. 2 Issuance of Facility Operating License

Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission) has issued Facility Operating License No. NPF-85 to the Philadelphia Electric Company, (the licensee) which authorizes operation of the Limerick Generating Station, Unit No. 2 (the facility), by Philadelphia Electric Company at reactor core power levels of 3293 megawatts thermal in accordance with the provisions of the License, the Technical Specifications and the Environmental Protection Plan.

The Limerick Generating Station, Unit No. 2, is a boiling water nuclear reactor located on the licensee's site in Montgomery and Chester Counties, Pennsylvania on the banks of the Schuylkill River approximately 1.7 miles southeast of the city limits of Pottstown, Pennsylvania and 21 miles northwest of the city limits of Philadelphia, Pennsylvania.

The application for the license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the License. Prior public notice of the overall action involving the proposed issuance of an operating license was published in the **Federal Register** on August 21, 1981 (46 FR 42557 through 42558).

The Commission has determined that the issuance of this license will not result in any environmental impacts other than those evaluated in the Final Environmental Statement since the activity authorized by the license is encompassed by the overall action evaluated in the Final Environmental Statement.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of the exemptions included in this license will have no significant impact on the environment (54 FR 15851), (54 FR 24607) and (54 FR 33298).

For Further details in respect to this action, see (1) Facility Operating License NPF-85 complete with Technical Specifications and the Environmental Protection Plan; (2) the final report of the Advisory Committee on Reactor Safeguards, dated May 11, 1989; (3) the Commission's Safety Evaluation Report, dated August 1983 (NUREG-0991), Supplements 1 through 9; (4) the Final Safety Analysis Report and Amendments thereto; (5) the Environmental Report and supplements thereto; (6) the Final Environmental Statement dated April 1984 (NUREG-0974); (7) the Atomic Safety and Licensing Board Decision, LBP-85-25, dated July 22, 1985; (8) the Commission's Order dated July 7, 1989, and (9) the Commission's Memorandum and Order dated August 25, 1989.

These items are available for public inspection at the Commission's Public Document Room, 2120 L Street (Lower Level), NW., Washington, DC 20555, and at the Pottstown Public Library, 500 High Street, Pottstown, Pennsylvania, 19464. A copy of Facility Operating License NPF-85 may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Reactor Projects I/II. Copies of the Safety Evaluation Report and its Supplements 1 through 9 (NUREG-0991) and the Final Environmental Statement (NUREG-0974) may be purchased through the U.S. Government Printing Office by calling (202) 275-2060 or by writing to the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies may also be purchased from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.

Dated at Rockville, Maryland, this 25th day of August 1989.

For the Nuclear Regulatory Commission.

Walter R. Butler,

Director, Project Directorate I-2, Division of Reactor Projects I/II, Office of Nuclear Reactor Regulation.

FR Doc. 89-20647 Filed 8-31-89; 8:45 am]

BILLING CODE 7590-01-M

OFFICE OF PERSONNEL MANAGEMENT

Information Collection for OMB Review

AGENCY: Office of Personnel Management.

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1980 (44 U.S.C. Chapter 35) and 5 CFR part 1320, we are announcing submission of our request to OMB for approval to extend the OMB clearance on the "Applicant's Statement of Selective Service Registration Status" which Federal job applicants must complete for agencies prior to appointment. Unless extended, use of the statement must terminate on October 31, 1989. By law, 5 U.S.C. 3328, agencies may not appoint non-registrants. Since the law is permanent, executive agencies will have a continuing need to obtain and review the information applicants provide in the statements to determine whether they have registered. (The text of the statement is published in our regulations on the Selective Service registration requirement at 5 CFR part 300, subpart G.) For jobs at OPM, we estimate about 500 applicants complete the statement annually. At .02 hours per statement, the public reporting burden is 10 hours. Governmentwide, we estimate about 150,000 applicants complete the statement, for a total public reporting burden of 3,000 hours. For copies of the statement, call Grace W. Butler, on (202) 632-0259.

COMMENT DATE: Comments on this proposal should be received within 10 working days from the date of this publication.

ADDRESS: Send or deliver comments to—

C. Ronald Trueworthy, Agency Clearance Officer, U.S. Office of Personnel Management, 1900 E Street NW., Room 6410, Washington, DC 20415.

and

Joseph Lackey, Information Desk Officer, Office of Information and Regulatory Affairs, Office of Management and Budget, Room 3201, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Thomas O'Connor, (202) 653-9407.

U.S. Office of Personnel Management,

Constance Berry Newman,

Director.

[FR Doc. 89-20650 Filed 8-31-89; 8:45 am]

BILLING CODE 6325-01-M

POSTAL RATE COMMISSION

[Docket No. A89-14; Order No. 841]

Flomot, Texas 79234 (G.D. Pope, Petitioner); Order Accepting Appeal and Establishing Procedural Schedule Under 39 U.S.C. 404(b)(5)

Issued August 29, 1989.

Before Commissioners: Henry R. Folsom, Vice-Chairman; John W. Crutcher; W.H. "Trey" LeBlanc, III; Patti Birge Tyson.

Docket Number: A89-14

Name of Affected Post Office: Flomot, Texas 79234

Name(s) of Petitioner(s): G.D. Pope
Type of Determination: Consolidation
Date of Filing of Appeal Papers: August 24, 1989
Categories of Issues Apparently Raised:
1. Effect on postal services [39 U.S.C. 404(b)(2)(C)].
2. Effect on Postal Service employees [39 U.S.C. 404(b)(2)(B)].

Other legal issues may be disclosed by the record when it is filed; or, conversely, the determination made by the Postal Service may be found to dispose of one or more of these issues.

In the interest of expedition, in light of the 120-day decision schedule [39 U.S.C. 404(b)(5)], the Commission reserves the right to request of the Postal Service memoranda of law on any appropriate issue. If requested, such memoranda will be due 20 days from the issuance of the request; a copy shall be served on the petitioners. In a brief or motion to dismiss or affirm, the Postal Service may incorporate by reference any such memoranda previously filed.

The Commission orders:

(A) The record in this appeal shall be filed on or before September 8, 1989.

(B) The Secretary shall publish this Notice and Order and Procedural Schedule in the **Federal Register.**

By the Commission.

Cyril J. Pittack,

Acting Secretary.

Appendix

August 14, 1989: Filing of petition.

August 29, 1989: Notice and order of filing of appeal.

September 18, 1989: Last day of filing of petitions to intervene [*see* 39 CFR 3001.111(b)].

September 28, 1989: Petitioners' participant statement or initial brief [*see* 39 CFR 3001.115(a) and (b)].

October 18, 1989: Postal service answering brief [*see* 39 CFR 3001.115(c)].

November 2, 1989: Petitioners' reply brief should petitioners choose to file one [*see* 39 CFR 3001.115(d)].

November 9, 1989: Deadline for motions by any party requesting oral argument. The Commission will schedule oral argument only when it is a necessary addition to the written filings [*see* 39 CFR 3001.116].

December 11, 1989: Expiration of 120-day decisional schedule [*see* 39 CFR 404(b)(5)].

[FR Doc. 89-20666 Filed 8-31-89; 8:45 am]

BILLING CODE 7710-FW-M

[Docket No. A89-13; Order No. 840]

Swan Lake, Mississippi 38958 (William Gay Flautt, Petitioner); Order Accepting Appeal and Establishing Procedural Schedule Under 39 U.S.C. Sec. 404(b)(5)

Issued August 29, 1989

Before Commissioners: Henry R. Folsom, Vice-Chairman; John W. Crutcher; W. H. "Trey" LeBlanc III; Patti Birge Tyson.

Docket Number: A89-13
Name of Affected Post Office: Swan Lake, Mississippi 38958
Name(s) of Petitioner(s): William Gay Flautt
Type of Determination: Consolidation
Date of Filing of Appeal Papers: August 17, 1989
Categories of Issues Apparently Raised:
1. Effect on postal services [39 U.S.C. 404(b)(2)(C)]
2. Economic savings [39 U.S.C. 404(b)(2)(D)]

Other legal issues may be disclosed by the record when it is filed; or, conversely, the determination made by the Postal Service may be found to dispose of one or more of these issues.

In the interest of expedition, in light of the 120-day decision schedule [39 U.S.C. 404(b)(5)], the Commission reserves the right to request of the Postal Service memoranda of law on any appropriate issue. If requested, such memoranda will be due 20 days from the issuance of the request; a copy shall be served on the petitioner. In a brief or motion to dismiss or affirm, the Postal Service may incorporate by reference any such memoranda previously filed.

The Commission orders:

(A) The record in this appeal shall be filed on or before September 1, 1989.

(B) The Secretary shall publish this Notice and Order and Procedural Schedule in the **Federal Register.**

By the Commission.

Charles L. Clapp,

Secretary.

August 17, 1989: Filing of Petition
August 28, 1989: Notice and Order of Filing of Appeal
September 11, 1989: Last day of filing of petitions to intervene [*see* 39 CFR 3001.111(b)]
September 21, 1989: Petitioner's Participant Statement or Initial Brief [*see* 39 CFR 3001.115(a) and (b)]
October 11, 1989: Postal Service Answering Brief [*see* 39 CFR 3001.115(c)]
October 26, 1989: Petitioner's Reply Brief should petitioner choose to file one [*see* 39 CFR 3001.115(d)]
November 2, 1989: Deadline for motions by any party requesting oral argument. The Commission will schedule oral argument only when it is a necessary addition to the written filings [*see* 39 CFR 3001.116]
December 15, 1989: Expiration of 120-day decisional schedule [*see* 39 U.S.C. § 404(b)(5)]

[FR Doc. 89-20667 Filed 8-31-89; 8:45 am]

BILLING CODE 7710-FW-M

DEPARTMENT OF STATE

[Public Notice CM-8/1301]

Secretary of State's Advisory Committee on Private International Law; Study Group on International Trade Documentation; Meeting

The Study Group on International Trade Documentation will hold its second meeting at 10:00 a.m. on Monday, September 18, 1989 in New York at the Fordham University School of Law, Faculty Reading Room, 140 West 62d Street, New York, NY. The Study Group carries out its functions as part of the Secretary of State's Advisory Committee on Private International Law.

The meeting agenda will include (a) possible U.S. positions on the scope and content of a proposed model law on international letters of credit to be prepared by the United Nations Commission on International Trade Law (UNCITRAL) and (b) a review of proposed final rules on guarantees to be issued by the International Chamber of Commerce.

The meeting will cover the impact of the proposed rules on letter of credit law in the United States, and will cover other issues for possible inclusion in a model national law such as non-documentary conditions, defenses, party autonomy and jurisdiction. The Study Group will take into account recent studies on Articles 5 of the Uniform Commerical Code.

Information on the UNCITRAL project and the proposed ICC rules are set forth in several Reports prepared by the UNCITRAL Secretariat on Stand-By Letters of Credit and Guarantees—United Nations Docs. A/CN.9/301, March 21, 1988; A/CN.9/WG.II/WP.63, September 16, 1988, and A/CN.9/316, December 12, 1988. Copies of the Reports and the proposed final uniform ICC Rules may be requested by writing Harold S. Burman at the Office of the Legal Adviser, L/PIL, Room 402, 2100 "K" Street NW., Washington DC 20037-7180, by FAX to (202) 632-5283, or by calling direct to (202) 653-9852.

Members of the general public may attend the meeting up to the capacity of the meeting room. As access to the

meeting room is controlled, the office indicated above should be notified not later than Wednesday, September 13, 1989 of the name, affiliation, address and phone number of persons wishing to attend. For additional information, please contact the office indicated above.

Peter H. Pfund,

Assistant Legal Adviser for Private International Law and Vice-Chairman, Secretary of State's Advisory Committee on Private International Law.

[FR Doc. 89-20604 Filed 8-31-89; 8:45 am]

BILLING CODE 4710-08-M

DEPARTMENT OF TRANSPORTATION

Notice of Application for Certificates of Public Convenience and Necessity and Foreign Air Carrier Permits Filed Under Subpart Q During the Week Ended August 25, 1989

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 application, or motion to modify scope are set forth below for each aplication. 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: 46459

Date filed: August 21, 1989.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: September 18, 1989.

Description:

Joint Application of Midway Airlines, Inc., Eastern Air Lines, Inc., and Continental Airlines, Inc. request the Department to approve, pursuant to section 401(a) and 401(h) of the Act, and Subpart Q of the Regulations requests (a) the amendment of two route certicates of Eastern and Continental so as to delete their Philadephia-Toronto/Montreal nonstop authority and (b) the transfer of such foreign route authority to an new certificate issued in the name of "Midway Airlines, Inc."

Docket No. 46463

Date Filed: August 23, 1989

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: September 1, 1989.

Description:

Application of Continental Airlines, Inc., pursuant to Order 89-8-8, requests a certificate of public convenience and necessity to provide scheduled foreign air transportation of persons, property and mail between Honolulu, Hawaii, on the one hand, and Tokyo, Japan on the other.

Docket No. 46466

Date Filed: August 24, 1989.

Due Date for Answers, Conforming Applications, or Motions to Modify Scope: September 1, 1989.

Description:

Application of Hawaiian Airlines, Inc. pursuant to Order 89-8-8, requests a certificate of public convenience and necessity to authorize non-stop scheduled foreign air transportation of persons, property and mail between Honolulu, Hawaii and Nagoya, Japan.

Docket No. 46463

Date Filed: August 25, 1989

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: September 1, 1989.

Description:

Application of Trans World Airlines, Inc. pursuant to Order 89-8-8 and Section 401 of the Act applies for a certificate of public convenience and necessity to permit TWA to provide air transportation services between Honolulu, Hawaii, on the one hand, and Tokyo-Japan, on the other.

Docket No. 46238

Date Filed: August 21, 1989

Due Date for Answers, Conforming Applications, or Motions to Modify Scope: September 18, 1989.

Description:

Fourth Amended Application of Servicios De Transportes Aereos Fueguinos, S. A., pursuant to Section 402 and the Act and Subpart Q of the Regulations requests that it be granted a foreign air carrier permit.

Docket No. 46472

Date Filed: August 25, 1989

Due Date for Answers, Conforming Applications, or Motion of Modify Scope: September 22, 1989.

Description:

Application of USAir, Inc. pursuant to section 401 of the Act and Subpart Q of the Act applies for a certificate of public convenience and necessity so as to authorize nonstop air service between Baltimore/Washington, on the one hand, and Ottawa, Ontario, and Montreal, Quebec, Canada, on the other hand.

Docket No. 45390

Due Date for Answers, Conforming Applications, or Motions to Modify Scope: September 19, 1989.

Description:

Amendment No. 1 to the Application of Alaska Airlines, Inc., pursuant to section 401 of the Act and Subpart Q of the Regulations requests that it be issued a certificate of public convenience and necessity authorizing Alaska to engage in scheduled foreign air transportation betwen Anchorage and Nome, Alaska and Magadan, Khabarovsk and Provideniya, U.S.S.R.

Phyllis T. Kaylor,

Chief, Documentary Services Division.

[FR Doc. 89-20642 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-62-M

Federal Aviation Administration

Life Preservers; Availability of Technical Standard

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of availability of technical standard order (TSO) and request for comments.

SUMMARY: The draft TSO-C13f prescribes the minimum performance standards that life preservers must meet in order to be identified with the TSO marking "TSO-C13f."

DATE: Comments must identify the TSO file number and be received on or before October 30, 1989.

ADDRESS: Send all comments on the proposed technical standard order to: Technical Analysis Branch, AIR-120, Aircraft Engineering Division, Aircraft Certification Service, File No. TSO-C13f, Federal Aviation Administration, Room 335, 800 Independence Avenue, SW., Washington, DC 20591

OR DELIVER COMMENTS TO: Federal Aviation Administration, Room 335, 800 Independence Avenue, SW., Washington, DC 20591.

FOR FURTHER INFORMATION CONTACT: Ms. Bobbie J. Smith, Technical Analysis Branch, AIR-120, Aircraft Engineering Division, Aircraft Certification Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, Telephone (202) 267-9516.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interest persons are invited to comment on the proposed TSO listed in this notice by submitting such written data, views, or arguments as they may

desire. Communications should identify the TSO file number and be submitted to the address specified above. All communications received on or before the closing date for comments specified above will be considered by the Director of the Aircraft Certification Service before issuing the final TSO.

Background

TSO–C13f is essentially identical to TSO–C13e except for the establishment of the new infant-small child category for life preservers and the deletion of the current infant category. The infant-small child category life preserver is for use by persons weighing up to 35 pounds and must prevent contact of the wearer's upper torso (i.e., from the waist up) with the water. For the establishment of the new life preserver category, changes are made in paragraph (b)(2) of the TSO and in the following paragraphs of Appendix 1, "Federal Aviation Administration Standard for Life Preservers," of the TSO: Paragraphs 2, 4.1.4.1, 4.1.4.3, 4.1.5, 4.1.8, 4.19, 4.1.10, 4.1.11, 4.1.12.2, 4.1.12,3, 4.2.2, and 5.7. Paragraph (d), Previously Approved Equipment, is revised to incorporate a change previously announced in the March 3, 1988, **Federal Register**. An editorial change is made in paragraph (e)(2) of the TSO.

How To Obtain Copies

A copy of the proposed draft TSO may be obtained by contacting the person under "For Further Information Contact." Federal Test Method Standard No. 191A may be examined at any FAA Aircraft Certification Office, and may be obtained (or purchased) from the General Services Administration, Business Service Center, Region 3, 7th and D Streets, SW., Washington, DC 20407.

Issued in Washington, DC, on August 28, 1989.

John K. McGrath,

Acting Manager, Aircraft Engineering Division Aircraft Certification Service.

[FR Doc. 89–20620 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–13–M

National Highway Traffic Safety Administration

[Docket No. IP 88–04, Notice 2]

Chrysler Corp., Withdrawal of Petition for Determination of Inconsequential Noncompliance

On October 26, 1988, Chrysler Corporation of Detroit, Michigan, petitioned to be exempted from the notification and remedy requirements of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1381 *et seq.*) for an apparent noncompliance with 49 CFR 571.100, Federal Motor Vehicle Safety Standard No. 100, "Controls and Displays." Chrysler had failed to provide horn symbols on more than 120,000 1988 Plymouth Horizon and Dodge Omni passenger cars. The basis of the petition was that the noncompliance was inconsequential as it relates to motor vehicle safety.

Notice of receipt of the petition was published on December 14, 1988, and an opportunity afforded for comment (53 FR 50348). Subsequently, Chrysler informed the agency that it would perform notification and remedial action by notifying all owners of the affected vehicles of the horn location, and urge that the notification be placed in the operator's manual for reference by future drivers. It asked NHTSA to "void" its inconsequentiality petition. NHTSA interprets this as a request for withdrawal of the petition, and therefore the agency will take no further action on it.

Authority: 15 U.S.C. 1417; delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: August 28, 1989.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 89–20601 Filed 8–31–89; 8:45 am]

BILLING CODE 4910–59–M

[Docket No. EX89–4; Notice 1]

Isis Imports Ltd.; Petition for Temporary Exemption From Federal Motor Vehicle Safety Standard No. 208

Isis Imports, Ltd., of San Francisco, Calif., has petitioned for a temporary exemption from the passive restraint requirements of Motor Vehicle Safety Standard No. 208 *Occupant Restraint Systems*. The basis of the petition is that compliance would cause substantial economic hardship.

This notice of receipt of the petition is published in accordance with the regulations of the National Highway Traffic Safety Administration (49 CFR part 555) and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

The brand of motor vehicle for which exemption is requested is the Morgan open car, or convertible. The British manufacturer of the Morgan has not offered its vehicle for sale in the United States since the early days of the Federal motor vehicle safety standards. In recent years, however, a small number of Morgan cars have been sold in the United States by Isis Imports. They differ from their British counterparts, not only in modifications necessary for compliance with the Federal motor vehicle safety standards, but also in their engines, which are propane fueled. Isis imports as motor vehicle equipment the individual components of the Morgan other than the engine, assembles them in the United States, adds the propane engine, and as the manufacturer of the vehicle, certifies its conformance to all applicable Federal safety and bumper standards. This has been a long-standing practice, and acceptable to NHTSA. In contrast to this is the practice of concern to NHTSA (see 54 FR 17775) in which all parts necessary to the vehicle, including its engine, are imported separately as motor vehicle equipment for subsequent assembly, in an attempt to avoid importation bond and NHTSA compliance procedures applicable to fully assembled nonconforming motor vehicles. The vehicle assembled by Isis in the U.S. is deemed sufficiently different from the one produced by Morgan in Britain that Isis may be regarded as its manufacturer, not its converter, even though the brand names are the same.

Isis assembled 11 Morgans for sale in the U.S. in the 12-month period preceding the filing of its petition. It argues that compliance with the passive restraint requirements of Standard No. 208 will cause it substantial economic hardship, and that it has in good faith attempted to comply with the standard. It asks for a 3-year exemption from the requirements, during which time it will continue to provide protection through its current three-point lap-shoulder belt system.

Preliminary, NHTSA notes that the passive restraint requirements have become effective for 100% of passenger car production, as of September 1, 1989, through a 3-year phase-in period during which convertibles such as petitioner's car, were exempted from compliance. On March 30, 1987, the agency published a notice announcing that it had reexamined the question of automatic restraint requirements for convertibles, and that it had concluded that it was reasonable and practicable for convertibles to meet these requirements as of September 1, 1989 (52 FR 10122). Two comments for reconsideration of the requirement were filed, one by Isis. It commented that the necessary automatic restraint components would not be available through its normal commercial channels until a considerable period of time after the major manufacturers' vehicles were equipped with automatic restraints. The agency denied these petitions on April

27, 1988 (53 FR 15067), on the basis that insufficient evidence had been submitted to show that automatic restraint systems could not be installed in vehicles that were not originally equipped with such systems. The denial was published approximately 16 months before the effective date of September 1, 1989.

In the 15 months since the denial, Isis has pursued several avenues of compliance, discussed in greater detail in its petition. Its initial interest was acquisition of an air bag system, but it found insufficient information available in the U.S. as to whether Chrysler's system would be suitable for its car. Because NHTSA's notice of denial had mentioned the automatic restraint system on Alfa Romeo convertibles as a viable and practicable method of compliance, Morgan on behalf of Isis contacted Autoliv, "U.K. agents for the Electrolux 2-point motorized belt system used in the Alfa." Although Autoliv submitted a proposal for installation of the Alfa system, it expressed reservations about the space available for its installation and the maintenance of rail form and reliability with vehicle movement over uneven surfaces. Morgan had contacted the Motor Industry Research Association (MIRA), which submitted a proposal late in March 1989, for development of an airbag system. In July 1989 the development costs of such a system were judged too high to be feasible, and MIRA's efforts then turned towards an automatic belt restraint system. Petitioner believes it can financially meet the MIRA development costs spread over a 3-year period, whereas a more immediate compliance (18 months) through the Autoliv system could not be amortized through a retail price increase in a volume of 11 cars without creating substantial financial hardship. Petitioner had a net loss exceeding $63,000 in 1988, and a cumulative net loss exceeding $60,000 for its last four tax years.

New car sales generate 90% of the petitioner's income, so that a denial of the petition would force it "to cease doing business". Sales of spare parts and service would be inadequate to fund development of a passive restraint system without new car sales. Isis argues that an exemption would be in the public interest and consistent with the objectives of the National Traffic and Motor Vehicle Safety Act, because its vehicles contribute to the alternative fuel industry. Continued availability of the Morgan will help to maintain the existing diversity of motor vehicles in the United States. The small number of vehicles likely to be covered by the exemption, and the limited use that is made of them as second or third vehicles will have an immaterial effect upon motor vehicle safety.

Interested persons are invited to comment on the petition of Isis described above. Comments should refer to the docket number and be submitted to Docket Section, Room 5109, National Highway Traffic Safety Administration, 400 Seventh St., SW., Washington, DC 20590. it is requested but not required that five copies be submitted.

All comments received before the close of business on the comment closing date indicated below will be considered. The petition and supporting materials, and all comments received, are available for examination in the docket both before and after the closing date. Comments received after the closing date will be considered to the extent practicable. Notice of final action on the petition will be published in the **Federal Register** pursuant to the authority indicated below.

Comment closing date: October 2, 1989.

Authority: 15 U.S.C. 1410; delegations of authority at 49 CFR 1.50 and 501.8

Issued on: August 25, 1989.

Ralph J. Hitchcock,

Acting Associate Administrator for Rulemaking.

[FR Doc. 89-20602 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-59-M

Urban Mass Transportation Administration

Intent To Prepare an Environmental Impact Statement for South Oak Cliff Corridor Transit Improvements in Dallas, TX

AGENCY: Urban Mass Transportation Administration, USDOT.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: The Urban Mass Transportation Administration (UMTA) and Dallas Area Rapid Transit (DART) are undertaking the preparation of an Environmental Impact Statement (EIS) for transit improvements in the South Oak Cliff Corridor of Dallas. The EIS is being prepared in conformance with 40 CFR Parts 1500–1508, Council on Environmental Quality, *Regulations for Implementing the Procedural Requirements of the National Environmental Policy Act of 1969 (as amended);* and 49 CFR Part 622, Urban Mass Transportation Administration, *Environmental Impact and Related Procedures.* In addition, in conformance with the Urban Mass Transportation Act and UMTA policy, the Draft EIS will be prepared in conjunction with an Alternatives Analysis, and the Final EIS in conjunction with Preliminary Engineering.

FOR FURTHER INFORMATION CONTACT:

Ms. Peggy Crist, UMTA Region VI, 819 Taylor Street, Suite 9A–32, Fort Worth, Texas 76102; telephone (817) 334–3787,

or

Mr. Doug Allen, Dallas Area Rapid Transit, 601 Pacific Avenue, Dallas, Texas 75202; telephone (214) 658–6297

SUPPLEMENTARY INFORMATION:

Scoping

Members of the public and affected Federal, State of Texas, and local agencies are invited to comment on all aspects of the study scope. Comments on the appropriateness of the alternatives and impact issues listed in this notice are encouraged. Specific suggestions on additional alternatives to be examined and issues to be addressed are welcome and will be given serious consideration in developing the final study scope.

Additional information on the EIS process, alternatives, and environmental impact issues to be addressed by the study is contained in a "Scoping Information" document. Copies have been sent to affected Federal, State and local government agencies and interested parties on record, and are available from the DART contact listed above.

Scoping meetings will be held on the dates, times, and places indicated below.

Day/date/time and location:

1. Monday, September 18, 1989, 7:00 p.m.—Rodger Q. Mills Elementary School Auditorium, 1515 Lynn Haven
2. Tuesday, September 19, 1989, 7:00 p.m.—B.F. Darrell Intermediate School, 4730 S. Lancaster Road
3. Thursday, September 21, 1989, 3:00 p.m.—DART Board Room, 7th Floor, 601 Pacific Avenue
4. Monday, September 25, 1989, 6:30 p.m.—Sears Community Room, 1409 S. Lamar Street

These meetings are not formal public hearings. Public hearings will be held after the Draft EIS is completed. DART staff will be present to describe project alternatives, answer questions and receive comments.

Scoping comments may be made either orally at the scoping meetings or in writing up to ten (10) days after the last meeting. General comments are welcome at any time throughout the study.

Statement of the Problem

Within the South Oak Cliff Corridor, local bus service on surface streets is the only transit service currently available for a population that:

- Is heavily dependent on transit. In the South Oak Cliff Corridor, there is greater use per capita of the existing DART bus system than in any other corridor in the City of Dallas.
- Has a low number of nearby job opportunities relative to the City of Dallas as a whole, and therefore South Oak Cliff workers travel farther to work than the average Dallas worker.
- Must use congested Trinity River crossings and congested Dallas Central Business District (CBD) streets and highways to reach their jobs and other attractions in a majority of cases.

Improved transit services will reduce travel times and thus increase the availability of opportunities for South Oak Cliff residents elsewhere in the DART Service Area, including job, education, medical, shopping, and cultural opportunities. Improved transit service will also provide opportunities for economic development in the Corrdior.

Corridor Description

The South Oak Cliff Corridor is a major travel corridor entirely within the Dallas city limits. The Corridor encompasses the Dallas CBD and that portion of southern Dallas bounded by U.S. 67 (R.L. Thornton Freeway and Marvn D. Love Freeway) on the west, the Dallas CBD on the north, I–45 (Julius Schepps Freeway) on the east, and the DART Service Area boundary which is generally along I–635 (Lyndon B. Johnson Freeway), on the south.

Linear public utility and railroad rights-of-way passing through the Corridor provide opportunities for new transit guideway without the high cost of tunneling or the disruption of assembling a new right-of-way in an urbanized area.

Alternatives

Transportation alternatives proposed for consideration in the Corridor are as follows:

- *No-Build.* Maintenance of transit service at levels commensurate with growth in the Corridor, including implementation of already programmed transportation improvements.
- *Transportation System Management (TSM) Alternative.* Enhanced bus service and facilities improvements without investing in a new fixed guideway. Improvements include rationalization of bus routes and frequencies, high occupancy vehicle (HOV) lanes on existing streets, signal timing improvements, bus park-and-ride and transfer centers and other low cost bus improvements.
- *Light Rail Transit (LRT) Alternative.* Standard light rail transit (LRT) with grade separations where warranted, stations with rider amenities, and standard 150–180 passenger capacity vehicles.

LRT Alignment Alternatives

Various DART LRT alignment studies during 1987 and 1988 suggest that the analysis should focus outside the Dallas CBD on an alignment that leaves the Dallas Railroad Right-of-Way District near I–30 (R.L. Thornton Freeway) and continues southeast along the Atchison, Topeka & Santa Fe Railroad Company (ATSF RR) City Branch right-of-way. This alignment then curves southwest and crosses the Trinity River adjacent to the ATSF RR right-of-way. South of the Trinity River, the alignment turns south off the ATSF RR right-of-way, and follows a high-tension power line right-of-way to Illinois Avenue. The alignment parallels Denley Drive, and then crosses Illinois Avenue and runs along the east side of Lancaster Road; near Ledbetter Drive it crosses to the west side of Lancaster Road and ends at Camp Wisdom Road (called Simpson Stuart Road on the east side of Lancaster Road).

This alignment is basically the alignment shown in DART's August 1986 Service Plan. It also reflects a preferred Trinity River crossing (Service Plan crossing) that was selected by the DART Board on September 8, 1987 following a 1987 Trinity River crossing refinement study and public hearings. It reflects a preferred alignment (East Lancaster) south of Illinois Avenue that was selected by the DART Board on May 10, 1988 following a 1988 study of an alignment south of Illinois Avenue. DART will reevaluate this alignment in the EIS.

Within the Dallas CBD, the 1989 System Plan suggests that the solution should focus on a surface Transitway Mall along Pacific Avenue and Bryan Street with improved pedestrian spaces and maintenance of necessary local building access for parking and deliveries. DART proposes to further evaluate this alignment in the EIS, as well as a surface treatment along Griffin Street to Elm Street to Harwood Street to Bryan Street. The Pacific/Bryan alignment crosses R.L. Thornton Freeway at the ATSF RR City Branch bridge and bends west to enter the railroad right-of-way behind Union Station. It then turns onto Pacific Avenue within the West End Historic District. It turns onto Bryan Street at its intersection with Pacific Avenue. This segment is generally at grade. For the South Oak Cliff AA/DEIS, the project ends in the vicinity of the North Central Expressway. DART has future plans to connect a locally funded North Central Corridor rapid transit line to the Transitway Mall at this point.

The Griffin/Elm/Harwood/Bryan alternative crosses R.L. Thornton Freeway just south of Griffin Street and bends north to follow Griffin Street. The number of traffic lanes on Griffin would be reduced to accommodate the transit tracks.

The alignment turns east at Elm Street. It continues on Elm Street as a Transitway Mall. At Harwood Street the alignment turns north and follows one side of the Harwood Street right-of-way. The alignment then turns east onto Bryan Street and continues as a Transitway Mall. It ends in the vicinity of the North Central Expressway where it would connect to the locally funded North Central Corridor transit line.

Comments are welcome and encouraged on the appropriateness of the alternatives listed above. Specific suggestions for additional alignment alternatives are also encouraged. All comments and suggestions will be given serious consideration in the compilation of a final set of alternatives for analysis.

Potential Impacts for Analysis

The potential impact issues proposed for analysis are:

- Transportation service changes, including transit cost, service, and patronage changes, and financial implications; the effect on traffic movement and railroad operations.
- Community impacts, including land use changes and zoning compatibility, neighborhood disruption, local and regional economic change, aesthetics, and utility relocation.
- Cultural resource impacts, including effects on historic, archeological, and park resources.
- Natural resource impacts, including air quality, noise and vibration, removal of preexisting hazardous waste, and effects on water resources and quality, natural features, and ecosystems.

The proposed impact assessment and its evaluation criteria will take into account both positive and negative impacts, direct and indirect impacts, short-term (construction) and long-term impacts, and site-specific and corridor-wide impacts. Evaluation criteria will be consistent with the applicable Federal, State of Texas, and local standards, criteria, regulations, and policies. Mitigation measures will be explored for

any adverse impacts that are identified as part of the analysis.

Comments are welcome and encouraged on the completeness of the list of issues to be addressed. Descriptions of site-specific issues also are encouraged. The planned on-going public involvement program also will provide numerous opportunities for the presentation of additional site-specific issues as the alternatives are detailed and their analysis progresses.

Issued on: August 25, 1989

Lee Waddleton,

Midwestern Area Director.

[FR Doc. 89-20641 Filed 8-31-89; 8:45 am]

BILLING CODE 4910-57-M

DEPARTMENT OF THE TREASURY

Office of the Secretary

[Supplement to Dept. Circular—Public Debt Series—No. 24-89]

Treasury Notes, Series AD-1991

Washington, August 23, 1989.

The Secretary announced on August 22, 1989, that the interest rate on the notes designated Series AD-1991, described in Department Circular—Public Debt Series—No. 24-89 dated August 17, 1989, will be 8¼ percent. Interest on the notes will be payable at the rate of 8¼ percent per annum.

Marcus W. Page,

Acting Fiscal Assistant Secretary.

[FR Doc. 89-20559 Filed 8-31-89; 8:45 am]

BILLING CODE 4810-40-M

[Supplement to Dept., Circular—Public Debt Series—No. 25-89]

Treasury Notes, Series L-1994

Washington, August 24, 1989.

The Secretary announced on August 23, 1989, that the interest rate on the notes designated Series L-1994, described in Department Circular—Public Debt Series—No. 25-89 dated August 17, 1989, will be 8¼ percent. Interest on the notes will be payable at the rate of 8¼ percent per annum.

Marcus W. Page,

Acting Fiscal Assistant Secretary.

[FR Doc. 89-20560 Filed 8-31-89; 8:45 am]

BILLING CODE 4810-40-M

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

Investment Policy Advisory Committee Services Policy Advisory Committee; Meetings and Determination of Closing of Meetings

The meetings of the Investment Policy Advisory Committee to be held September 13, 1989 from 7:45 a.m. to 9:00 a.m., in Geneva, Switzerland, the Services Policy Advisory Committee to be held September 25, 1989 from 9:30 a.m. to 11:30 a.m., in Washington, DC, will include the development, review and discussion of current issues which influence the trade policy of the United States. Pursuant to Section 2155(f)(2) of Title 19 of the United States Code, I have determined that these meetings will be concerned with matters the disclosure of which would seriously compromise the Government's negotiating objectives or bargaining positions.

Additional information can be obtained by contacting Yvonne Beeler, Office of Private Sector Liaison, Office of the United States Trade Representative, Executive Office of the President, Washington, DC 20506.

Carla A. Hills,

United States Trade Representative.

[FR Doc. 89-20663 Filed 8-31-89; 8:45 am]

BILLING CODE 3190-01-M

Sunshine Act Meetings

Federal Register
Vol. 54, No. 169
Friday, September 1, 1989

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

FEDERAL DEPOSIT INSURANCE CORPORATION:

NOTICE OF AGENCY MEETING

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that the Federal Deposit Insurance Corporation's Board of Directors will meet in open session at 2:00 p.m. on Tuesday, September 5, 1989, to consider a memorandum and resolution proposing the adoption of final amendments to part 327 of the Corporation's rules and regulations, entitled "Assessments," which amendments, in response to the requirements of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, would: (1) Extend the Corporation's assessment procedures to cover savings associations, and (2) provide a mechanism for funding the Financing Corporation ("FICO") through the end of 1989.

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550–17th Street NW., Washington, DC.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation at (202) 898–3813.

Dated: August 29, 1989.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 89–20710 Filed 8–29–89; 4:55 pm]

BILLING CODE 6714-01-M

FEDERAL MARITIME COMMISSION

TIME AND DATE: 10:00 am—September 6, 1989.

PLACE: Hearing Room One—1100 L Street, N.W., Washington, D.C. 20573–0001.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Investigation of Shipping Practices—Martyn Merritt, AMG Service, Inc., Oasis Express Line, Javelin Line, Trans Africa Line, Coast Container Line, Buccaneer Line and Union Exportadora Lines.

2. Docket No. 87–24—Foreign-to-Foreign Agreements—Exemption—Petitions for Reconsideration.

CONTACT PERSON FOR MORE INFORMATION: Joseph C. Polking, Secretary, (202) 523–5725.

Joseph C. Polking,

Secretary.

[FR Doc. 89–20709 Filed 8–29–89; 4:55 pm]

BILLING CODE 6730-01-M

U.S. NATIONAL COMMISSION ON LIBRARIES AND INFORMATION SCIENCE (NCLIS)

White House Conference Advisory Committee

DATE AND TIME: Sept. 20 and 21, 1989.

PLACE: Embassy Suites Hotel, 1250 22nd Street, NW, Wine Room, Washington, DC 20037.

STATUS:

Sept. 20, 1989, 1:30 p.m.–9:00 p.m., Open
Sept. 21, 1989, 9:00 p.m.–3:30 p.m., Open

MATTERS TO BE DISCUSSED:

Comments by Secretary of Education—Lauro F. Cavazos
White House Conference on Library and Information Services (WHCLIS) Advisory Committee
Subcommittee Reports:
—WHCLIS Resources
—WHCLIS Structure
—Preconference Activities
—Public Relations and Awareness
—Public and Private Sector Liaisons
—Delegate Selection
Compliance regarding ethical conduct and conflicts of interest
Propose logo
Executive Director search
Report on WHCLIST meeting
Report on State support package
Consider a planning project on objectives and goals of WHCLIS
Statistics for WHCLIS
Public Comment
WHCLIS newsletter
Report on responses to the Governor's letter
Consider having exhibitors at WHCLIS conference
Internal administrative items

Persons appearing before, or submitting only written statements to, the Advisory Committee are asked to hand over to the Committee prior to presenting testimony, 50 copies of their prepared statement. This will insure that ample copies are available for the members of the Advisory Committee, the attending press and the observers.

Special provisions will be made for handicapped individuals by contacting John W.A. Parsons 1 (202) 254–3100, no later than one week in advance of the meeting.

FOR FURTHER INFORMATION CONTACT: John W.A. Parsons, White House Conference, Special Assistant, 1111 18th Street, NW, Suite 302, Washington, DC 20036, 1 (202) 254–3100.

Dates: August 29, 1989.

John W.A. Parsons,

White House Conference Special Assistant.

White House Conference Advisory Committee—Meeting Agenda

September 20 & 21, 1989

Embassy Suites Hotel—Wine Room, 1250 22nd Street, NW., Washington, D.C. 20037

1:30–1:35

Welcome—Introduction of Advisory Committee, Members, and Guests

1:35–1:55

Comments by Secretary of Education—Lauro F. Cavazos

1:55–2:00

Approval of August 31, 1989 minutes

2:00–2:20

Subcommittee Reports: WHCLIS Resources —Chairman, Mahoney

2:20–2:50

WHCLIS Structure
—Chairman, Richard Akeryod, Jr.
Review of report submitted on August 3, 1989

2:50–3:10

Preconference Activities
—Chairman, James C. Roberts

3:30–3:50

Public and Private Sector Liaisons
—Chairman, Joseph Fitzsimmons

3:50–4:00

Break

4:00–4:30

Delegate Selection
—Chairman, Bill Asp

4:30–5:00

Presentation of information on ethical conduct and conflicts of interest—Joan DeLise
From Dept. of Ed., Office of General Counsel

5:00–5:45

Individual ID pictures, card preparation for WHCAC
Exhibit of proposed logo & stationary
Exhibit of proposed design for calling cards for WHCAC members and Staff

5:45–6:15

Break before working dinner

6:15–7:45

Working Dinner
—Discussion—Logo
—Discussion—Stationery
—Discussion-Calling card

7:45–8:00

Presentation of status of Executive Director search and screening and status of WHCLIS staffing

8:00–8:30

Report on WHCLIST Aug. 17–19, 1989 Meeting in Portland, Oregon by Ed Gleaves

8:30–9:00

Report on agreements with the Federal support for the States and Territories by Frank Stevens

9:00

Adjourn

Thursday, Sept. 21, 1989

9:00–9:40

Presentation of role of statistics related to WHCLIS—John Lorenz & Larry LaMoure

9:40–10:00

Consider sole-source procurement for purpose of a planning project on objectives and goals of WHCLIS

10:00–10:10

Break

10:10–11:00

Guests, written comments, questions, and dialogue

11:00–11:10

Should WHCLIS consider a monthly newsletter; Distribution of newsletter
(a) State Librarians
(b) Members of WHCLIST
(c) Governor's letter distribution list

11:10–11:25

Report on responses of Governor's letter of August 25, 1989

11:25–12:00

Consideration of commerical venders for profit as exhibitors at WHCLIS. Should WHCLIS encourage planning consultants to plan and run exhibits?

12:00–1:30

Working lunch
(a) Report by individual WHCAC members on State activities regarding WHCLIS

1:30–1:40

Report on new WHCLIS staff's space and phone service

1:40–1:50

Progress on WHCAC and procedures manual

1:50–2:10

Break

2:10–2:40

Status report on administrative items
(a) Appointment affidavit forms
(b) Confidential Statement of Employment and Financial Interest (ED form EP3)
(c) Signature of form on Ethical Conduct
(d) Travel forms
(e) Other additional forms by John W.A. Parsons, White House Conference Special Assistant

2:40–3:00

Old business

3:00–3:20

New business

3:20–3:30

WHCAC—Chairman's summary remarks, Daniel H. Carter

3:30

Set next meeting date and adjourn

[FR Doc. 89–20707 Filed 8–29–89; 4:21 pm]

BILLING CODE 7527-01-M

NATIONAL CREDIT UNION ADMINISTRATION

Notice of Meeting

TIME AND DATE: 9:30 a.m., Thursday, September 7, 1989.

PLACE: Filene Board Room, 7th Floor, 1776 G Street, NW., Washington, DC. 20456.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Approval of Minutes of Previous Closed Meetings.
2. Central Liquidity Facility Lines of Credit for FY 1990. Closed pursuant to exemptions (4) and (9)(A)(ii).
3. Appeal of Regional Director's Approval of FOM Amendment. Closed pursuant to exemptions (8) and (9)(A)(ii).
4. Appeal of Regional Director's Decision on Merger Bid. Closed pursuant to exemptions (8) and (9)(A)(ii).
5. Administrative Action under Sections 116 and 208 of the FCU Act. Closed pursuant to exemptions (8) and (9)(A)(ii).
6. Administrative Actions under Section 206 of the FCU Act. Closed pursuant to exemptions (8), (9)(A)(ii), and (9)(B).
7. Personnel Actions. Closed pursuant to exemptions (2) and (6).

FOR MORE INFORMATION CONTACT: Becky Baker, Secretary of the Board, Telephone (202) 682–9600.

Becky Baker,

Secretary of the Board.

[FR Doc. 89–20760 Filed 8–30–89; 8:45 am]

BILLING CODE 7535-01-M

RAILROAD RETIREMENT BOARD

Notice of Public Meeting

Notice is hereby given that the Railroad Retirement Board will hold a meeting on September 7, 1989, 9:00 a.m., at the Board's meeting room on the 8th floor of its headquarters building, 844 North Rush Street, Chicago, Illinois, 60611. The agenda for this meeting follows:

Portion Open to the Public

(1) Moving Expense Reimbursement.
(2) Regulations—Parts 202 and 301, Employers Under the Railroad Retirement Act and Railroad Unemployment Insurance Act.
(3) Regulations—Part 203, Employees Under the Act.
(4) Regulations—Part 212, Military Service.
(5) Regulations—Part 216, Eligibility for an Annuity.
(6) Regulations—Part 255, Recovery of Overpayments.

Portion Closed to the Public

(A) Appeal from Referee's Denial of Disability Annuity, Kenneth R. Finnission.
(B) Appeal of Nonwaiver of Overpayment, Charles Motkowski.

The person to contact for more information is Beatrice Ezerski, Secretary to the Board, COM No. 312–751–4920, FTS No. 386–4920.

Dated: August 29, 1989.

Beatrice Ezerski,

Secretary to the Board.

[FR Doc. 89–20749 Filed 8–30–89; 2:33 pm]

BILLING CODE 7905-01-M

SECURITIES AND EXCHANGE COMMISSION

Agency Meeting

Notice is hereby given, pursuant to the provisions of the Government in the Sunshine Act, Pub. L. 94–409, that the Securities and Exchange Commission will hold the following meeting during the week of September 5, 1989.

A closed meeting will be held on Wednesday, September 6, 1989, at 2:30 p.m.

The Commissioners, Counsel to the Commissioners, the Secretary to the Commission, and recording secretaries will attend the closed meeting. Certain staff members who are responsible for the calendared matters may also be present.

The General Counsel of the Commission, or his designee, has certified that, in his opinion, one or more of the exemptions set forth in 5 U.S.C. 552b(c) (4), (8), (9)(A), and (10) and 17 CFR 200.402(a) (4), (8), (9)(i), and (10), permit consideration of the scheduled matters at a closed meeting.

Commissioner Cox, as duty officer, voted to consider the items listed for the closed meeting in closed session.

The subject matter of the closed meeting scheduled for Wednesday, September 6, 1989, at 2:30 p.m., will be:

Regulatory matter regarding financial institution.
Settlement of administrative proceedings of an enforcement nature.
Institution of injunctive actions.
Settlement of injunctive action.
Institution of administrative proceedings of an enforcement nature.
Discussion of enforcement matter.

At times, changes in Commission priorities require alterations in the scheduling of meeting items. For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact: Daniel Hirsch at (202) 272–2100.

Dated: August 29, 1989.

Shirley E. Hollis,

Assistant Secretary.

[FR Doc. 89–20820 Filed 8–30–89; 3:49 pm]

BILLING CODE 6010–01–M

federal register

Friday
September 1, 1989

Part II

Department of Health and Human Services

Health Care Financing Administration

42 CFR Part 412

Medicare Program; Changes to the Inpatient Hospital Prospective Payment System for Fiscal Year 1990 Rates; Final Rule

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Part 412

[BPD-630-F]

RIN 0938-AE02

Medicare Program; Changes to the Inpatient Hospital Prospective Payment System and Fiscal Year 1990 Rates

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Final rule.

SUMMARY: We are revising the Medicare inpatient hospital prospective payment system to implement necessary changes arising from legislation and our continuing experience with the system. In addition, in the addendum to this final rule, we describe changes in the amounts and factors necessary to determine prospective payment rates for Medicare inpatient hospital services. In general, these changes are applicable to discharges occurring on or after October 1, 1989. We also set forth the rate-of-increase limits for hospitals and hospital units excluded from the prospective payment system.

EFFECTIVE DATE: This final rule is effective on October 1, 1989, except for 42 CFR 412.116, which is effective September 1, 1989.

FOR FURTHER INFORMATION CONTACT:

John Eppinger—Cancer Hospitals (301) 966-4516.

Linda McKenna—Interim Payment for Usually Long Lengths of Stay (301) 966-4530.

Barbara Wynn—All Other Issues (301) 966-4529.

ADDRESSES: To obtain individual copies of this document, contact the following:

Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

The charge for individual copies is $1.50 for each issue or for each group of pages as actually bound, payable by check or money order to the Superintendent of Documents.

SUPPLEMENTARY INFORMATION:

I. Background

A. Summary

Under section 1886(d) of the Social Security Act (the Act), a system of payment for acute care inpatient hospital stays under Medicare Part A (Hospital Insurance) based on prospectively-set rates was established effective with hospital cost reporting periods beginning on or after October 1, 1983. Under this system, Medicare payment is made at a predetermined, specific rate for each hospital discharge. All discharges are classified according to a list of diagnosis-related groups (DRGs). The regulations governing the inpatient hospital prospective payment system are located in 42 CFR part 412.

B. Summary of the Provisions of the Proposed Rule

On May 8, 1989, we published a proposed rule (54 FR 19636) which set forth changes to the prospective payment system that would be effective for the seventh year of operation of that system, that is, beginning on October 1, 1989. Following is a summary of the major changes we proposed to make to the system:

- As required by section 1886(d)(4)(C) of the Act, we proposed to adjust the DRG classifications and weighting factors for Federal fiscal year (FY) 1990.
- We proposed to update the wage index by basing it entirely on 1984 wage data. In addition, we proposed to make adjustments to the wage data to reflect the provisions of section 1886(d)(8)(C) of the Act, as enacted by section 8403(a) of the Technical and Miscellaneous Revenue Act of 1988 (Pub. L. 100-647).
- We discussed several current provisions of the regulations in 42 CFR part 412 and set forth certain proposed changes concerning—

—Annual publication of prospective payment rates;
—Payment for burn outlier cases;
—Payments to sole community hospitals;
—Beneficiary access to care in rural areas;
—Payments to cancer hospitals;
—Rural referral center criteria;
—Payment for disproportionate share hospitals; and
—Payment for the indirect costs of medical education.

- In the addendum to the proposed rule, we set forth proposed changes to the amounts and factors for determining the FY 1990 prospective payment rates. We also proposed new target rate percentages for determining the rate-of-increase limits for FY 1990 for hospitals and hospital units excluded from the prospective payment system.
- As required by sections 1886(e)(4) and (e)(5) of the Act, in Appendix C of the proposed rule we provided our recommendation of the appropriate percentage change for FY 1990 in the—

—Large urban, other urban, and rural average standardized amounts for inpatient hospital services paid for under the prospective payment system; and

—Target rate-of-increase limits to the allowable operating costs of inpatient hospital services furnished by hospitals and hospital units excluded from the prospective payment system.

- In addition, the proposed rule discussed in detail the March 1, 1989 recommendations made by the Prospective Payment Assessment Commission (ProPAC). ProPAC is directed by section 1886(d)(4)(D) of the Act to make recommendations to the Secretary with respect to adjustments to the DRG classifications and weighting factors and to report to Congress with respect to its evaluation of any adjustments made by the Secretary.

ProPAC is also directed, by the provisions of sections 1886(e)(2) and (e)(3) of the Act, to make recommendations to the Secretary on the appropriate percentage change factor to be used in updating the average standardized amounts beginning with FY 1986 and thereafter. We printed ProPAC's report, which includes its recommendations, as appendix D to the proposed rule (54 FR 1975).

C. Number and Types of Public Comments

A total of 288 items of correspondence containing comments on the proposed rule were received timely. Approximately one-half of the letters we received were protesting the inappropriateness of the current DRG classification and weighting factors for electrophysiologic studies and automatic implantable cardioverter defibrillator implant procedures. Of the remaining letters, the main areas of concern addressed by the commenters were—

- The 1.35 percent reduction in the DRG weights to account for a portion of the increase in the case-mix index between FY 1986 and FY 1988;
- The proposal to base the wage index on 1984 data only; and
- The revisions made to the wage index for rural counties whose hospitals are deemed urban. The contents of the proposed rule, the public comments, and our responses to those comments are discussed throughout this document in the appropriate sections.

There are four general comments that we are responding to here rather than in the more issue-specific areas below.

Comment: We received one comment expressing concern that HCFA has made no provision for increased costs of care in hospitals and hospital units excluded from the prospective system resulting from the enactment of the catastrophic coverage provisions. The

commenter noted that there should be an adjustment to the target rate to cover increases in the cost per discharge resulting from this legislation.

Response: As we stated on the proposed rule (54 FR 19636), we made revisions to the regulations in the September 30, 1988 final rule to address changes resulting from enactment of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360). Those revisions included adjustments to the prospective payment system, and the rate of increase ceiling for hospitals and units excluded from the prospective payment system, to take into consideration the reduction in payments to hospitals by Medicare beneficiaries resulting from the elimination of the day limitation on Medicare inpatient hospital services (section 101 of Pub. L. 100–360). Although these changes were final, we allowed a 60-day period for public comment since the changes had not previously been published as proposed. We are developing a final rule that responds to the comments we received.

Comment: One commenter suggested that our proposed changes neglect to address the problems of rural hospitals.

Response: The financial viability of rural hospitals and ensuring access to health care by rural beneficiaries is a matter of highest concern at HCFA. It should be noted that in the proposed rule we strongly urged a higher update factor for rural hospitals (54 FR 19748). We also proposed to ease the requirements and streamline the review process for qualifying as a sole community hospital, as well as liberalizing the requirements for regaining sole community hospital status when a hospital has opted to give up that status (54 FR 19649). We also solicited comments as to how our policies could be changed or improved to assure "essential access" to health care. Finally, we noted in the proposed rule that we are studying long term refinements including the possibility of eliminating separate urban and rural payment rates and revising the payment methodology for sole community hospitals (54 FR 19651).

We believe that these regulatory revisions and the studies we are undertaking demonstrate our commitment to examining the problems of rural hospitals and making appropriate policy changes to the prospective payment system. We reiterate that we believe that changes in Medicare policy alone are not sufficient to assure essential access to rural health care. A viable and effective rural health policy must involve Federal, State and local governments, and private insurers.

Comment: We received one comment noting that the proposed rule did not address payments for capital expenditures. The commenter recommended that payment for capital be set at 100 percent for FY 1990.

Response: We are required by section 1886(g)(1)(A) of the Act to include payment for capital-related costs as part of the prospective payment system for cost reporting periods beginning on or after October 1, 1991. We plan to publish a notice of proposed rulemaking concerning this requirement, which would outline our proposals and request public comment, and to publish a final rule timely. With respect to capital payment for FY 1990, there is no provision in current law for a reduction in payments; however, the Department's budget proposal for FY 1990 contains a provision that would reduce payments for inpatient hospital capital-related costs by 25 percent.

Comment: One commenter was concerned that the proposed rule did not address the treatment of malpractice costs in FY 1990. HCFA has stated, in a HCFA ruling (HCFAR 89–1) issued on January 26, 1989, that the recent court rulings of Georgetown I and Georgetown II also apply to the treatment of Medicare malpractice costs. HCFAR 89–1 states that the cost of malpractice premiums will be included in base year costs to determine hospital-specific rates for the base period. HCFAR 89–1 also states that future costs of malpractice will be included in hospital administrative and general (A&G) costs. The current hospital cost reporting form 2552 still includes worksheet D–8, which calculates malpractice premiums based on a risk portion and an A&G portion. Since HCFA has stated this method is no longer applicable, the commenter believes that HCFA must detail the treatment of malpractice costs in FY 1990.

The commenter recommends that HCFA publish its policy on changes in the treatment of malpractice costs prior to the final rule on prospective payment system for FY 1990 and allow hospitals adequate time for comment.

Response: In *Bowen* v. *Georgetown University Hospital, et al.*, 57 U.S.L.W. 4057 (U.S. Dec. 12, 1989) (Georgetown I), the Court found that the Secretary was not authorized to issue a retroactively effective rule. It is HCFA's Ruling, in HCFAR 89–1, that the Court's decision in Georgetown I controls appeals challenging the 1979 malpractice rule or the 1986 malpractice rule for cost reporting periods beginning before May 1, 1986, provided that these appeals satisfy jurisdictional requirements and that the hospital did not accept the May 11, 1988 "HHS Settlement Offer—Medicare Malpractice Insurance Costs Litigation" or otherwise settle. Qualifying hospitals will be reimbursed for their malpractice insurance premiums under the utilization reimbursement method in effect prior to the 1979 or 1986 malpractice rules.

It is also HCFA's Ruling that the District of Columbia Circuit Court's decision in *Georgetown University Hospital, et al.* v. *Bowen*, Nos. 88–5026 and 88–5040 (D.C. Cir. Nov. 15, 1988) (Georgetown II) controls pending malpractice insurance cost reimbursement claims under the pre–1979 utilization method for a hospital that did not accept the May 11, 1988 "HHS Settlement Offer—Medicare Malpractice Insurance Costs Litigation." That is, for qualifying hospitals, application of the pre–1979 method to the hospital's malpractice premiums in its prospective payment system base year is applicable to its hospital-specific rate throughout the prospective payment system transition period.

Because Georgetown I affects only the Secretary's authority to issue retroactive rules, prospective application of the 1986 malpractice rule (51 FR 11142) for cost reporting periods beginning on or after May 1, 1986, is unaffected by the Court's decision. HCFAR 89–1 does not state, nor was it intended to imply, that the ruling applies to the prospective application of the 1986 rule. Therefore, the current hospital cost reporting forms properly incorporate the methodology to calculate reimbursement for malpractice premiums based on a risk portion and an administrative portion, as provided by the 1986 rule.

II. Changes to DRG Classifications and Weighting Factors

A. Background

Under the prospective payment system, we pay for inpatient hospital services on the basis of a rate per discharge that varies by the DRG to which a beneficiary's stay is assigned. The formula used to calculate payment for a specific case takes an individual hospital's payment rate per case and multiplies it by the weight of the DRG to which the case is assigned. Each DRG weight represents the average resources required to care for cases in that particular DRG relative to the national average of resources used to treat all Medicare cases. Thus, cases in a DRG with a weight of 2.0 would, on average, require twice as many resources as the average Medicare case.

Congress recognized that it would be necessary to recalculate the DRG relative weights periodically to account for changes in resource consumption. Accordingly, section 1886(d)(4)(C) of the Act requires that the Secretary adjust the DRG classifications and weighting factors annually beginning with discharges occurring in FY 1988. These adjustments are made to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources. The changes to the DRG classification system and the proposed recalibration of the DRG weights for discharges occurring on or after October 1, 1989 are discussed below.

B. Reclassification of DRGs

1. General

Cases are classified into DRGs for payment under the prospective payment system based on the principal diagnosis, up to four additional diagnoses, and any procedures performed during the stay, as well as age, sex, and discharge status of the patient. The diagnostic and procedure information is expressed by the hospital using codes from the International Classification of Diseases, Ninth Edition, Clinical Modification (ICD–9–CM). The intermediary enters the information into its claims system and subjects it to a series of automated screens called the Medicare Code Editor (MCE). These screens are designed to identify cases that require further review before classification into a DRG can be accomplished.

After screening through the MCE and any further development of the claims, cases are classified by the GROUPER software program into the appropriate DRG. The GROUPER program was developed as a means of classifying each case into a DRG on the basis of the diagnosis and procedure codes and demographic information (that is, sex, age, and discharge status). It is used to classify past cases in order to measure relative hospital resource consumption to establish the DRG weights and to classify current cases for purposes of determining payment.

Currently, there are 477 DRGs in 23 major diagnostic categories (MDCs). Most MDCs are based on a particular organ system of the body (for example, MDC 6, Diseases and Disorders of the Digestive System); however, some MDCs are not constructed on this basis since they involve multiple organ systems (for example, MDC 22, Burns).

Principal diagnosis determines MDC assignment. Within most MDCs, cases are then divided into surgical DRGs (based on a surgical hierarchy that orders individual procedures or groups of procedures by resource intensity) and medical DRGs. Medical DRGs generally are differentiated on the basis of diagnosis, age, and presence or absence of complications or comorbidities (hereafter CC) only. Generally, GROUPER does not consider other procedures; that is, nonsurgical procedures or minor surgical procedures generally not done in an operating room are not listed as operating room (OR) procedures in the GROUPER decision tables. However, there are a few non-OR procedures that do affect DRG assignment for certain principal diagnoses, such as extracorporeal shock wave lithotripsy for patients with a principal diagnosis of urinary stones.

We proposed to make some changes to the DRG classification system on the basis of problems identified over the past year. These proposed changes and the comments we received concerning them as well as our responses are set forth below. In addition to comments related to each of the specific proposed DRG classification changes, we received some general comments, as follows:

Comment: One commenter indicated that HCFA should have made available to the public at the same time the proposed rule was published the proposed GROUPER and the maps used to change the FY 1988 diagnosis and procedure codes into their FY 1990 equivalents. The commenter would like this procedure to be followed in future years, also.

Response: Time does not permit us to make the proposed GROUPER available concurrent with proposed rule. We base our proposed changes on analysis of MEDPAR data received through December of the previous year in conjunction with medical consultation. Once the data are available, there is not sufficient time to perform the analysis, make the changes to the GROUPER, and then create a new GROUPER available for public purchase by the publication date of the proposed rule. Changes are not made to the GROUPER until shortly before publication of the final rule; that is, after all comments have been considered and further analysis has been made based on additional data received through June of the current year.

We believe it is possible for readers who have the current GROUPER and the MEDPAR data to develop the proposed GROUPER from the changes and methodology described in the proposed rule and to perform the review and confirm HCFA's projection, as the commenter desires. Thus, we believe that publishing the proposed GROUPER is not necessary to enable the public to comment on the significant issues related to DRG classification as set forth in the proposed rule.

With regard to the mapping of the FY 1988 cases into their FY 1990 equivalents, we do not as a matter of policy publish all the material because of the limited interest this material would have for the majority of readers and because of the voluminous amounts of information this would involve. However, this information is available to the public upon request. In addition, the MEDPAR file that was prepared for public release in conjunction with the proposed rule includes in each case its FY 1988 DRG and its proposed FY 1990 DRG assignments.

Comment: One vendor of computer software requested modifications to the GROUPER software. The commenter believe the GROUPER should indicate invalid procedure codes in addition to invalid principal diagnosis codes as a means of detecting mapping errors. In addition, the commenter stated that mapped codes are not usually submitted to a validation routine on the GROUPER or the MCE, and, therefore, a detection ability needs to be added.

Response: Mapping makes diagnosis and procedure codes that change in status (that is, new codes or codes that became obsolete or were revised) equivalent across GROUPER versions. Mapping is designed by a team of technical analysts, programmers, physicians, nurses, and medical records administrators. The GROUPER program does not judge the validity of a code; in mapping, the code is renamed so that the case is assigned to the proper DRG in each GROUPER version. Since both diagnosis and procedure codes and GROUPER logic may change annually, the GROUPER software must be redesigned each year based on patient care information.

The GROUPER overrides an invalid procedure or diagnosis code in many cases by ignoring the invalid code in favor of a coexisting valid code. This can be used to detect incorrect mapping even in an earlier GROUPER version.

The commenter's belief that mapped codes are not subjected to validation is incorrect. As part of reclassification and recalibration, we test the GROUPER, by analyzing a sample of MEDPAR cases that contain these mapped codes in order to make sure that the cases are being assigned to the intended DRG.

2. MDC 4: Diseases and Disorders of the Respiratory System

We have received a number of requests from hospitals and other organizations for the expansion of DRG

474 (Respiratory System Diagnosis with Tracheostomy) and DRG 475 (Respiratory System Diagnosis with Ventilator Support) to include principal diagnoses from any MDC when ventilator support is used. In addition, we have received reports of problems experienced by hospitals in the coding and billing of those cases in MDC 4 involving ventilator support.

Beginning with discharges occurring on or after October 1, 1987, cases with a principal diagnosis in MDC 4 and one of the tracheostomy procedure codes (31.1 (Temporary tracheostomy), 31.21 (Mediastinal tracheostomy), or 31.29 (Other permanent tracheostomy)) were assigned to the new DRG 474. Cases involving mechanical ventilation through endotracheal intubation were assigned to the medical DRG 475. DRG 475 included cases presenting a principal diagnosis assigned to MDC 4 and showing non-OR procedure codes 93.92 (Other mechanical assistance to respiration) and 96.04 (Insertion of endotracheal tube). Beginning with discharges occurring on or after October 1, 1988, the title for procedure code 93.92 was revised to "Other mechanical ventilation" and "Continuous positive airway pressure" was assigned a unique procedure code (93.90).

Currently, DRG 475 is assigned to cases with a respiratory system principal diagnosis when neither a temporary tracheostomy nor any operating room procedure is performed and both procedure code 96.04 and 93.92 or 93.90 are performed. The majority of cases involving surgery for respiratory diagnoses are routinely intubated endotracheally, if only on a prophylactic basis. This procedure is considered a part of the surgery and is not normally coded. Assuming that the hospital charges for the procedure, even when it is not coded, the weighting factors for surgical DRGs already account for the resources involved in intubating patients. Thus, DRG 475 was intended to account only for those cases for which there is no surgical procedure and the intubation will be likely to be of longer duration.

The American Association for Respiratory Care, the American College of Chest Physicians, the National Association of Medical Directors of Respiratory Care (NAMDRC), ProPAC, and numerous other commenters have expressed general support for the creation of DRGs 474 and 475. In addition, many commenters at that time encouraged the expansion of the DRGs to include patients with other than respiratory diagnoses. We stated that we would continue our research in this area, including analysis of superior means of identifying ventilator cases and ways to address this issue in postsurgical cases or for patients with nonrespiratory diagnoses.

We advised the medical community of our intent to target DRGs 474 and 475 for medical review by the Peer Review Organizations (PROs) to ensure that use of the diagnoses and procedures that result in assignment of cases to these DRGs was reasonable and appropriate. In fact, we were not aware of the extent of the problems experienced by hospitals until they were revealed by PRO review. In retrospect, we believe that we should have described in greater detail the situations in which these two new procedure-based DRGs would be assigned. In originally describing these DRGs, we did not reiterate that the necessary procedures had to be performed when the patient was an inpatient of the hospital submitting the bill.

Some hospital staffs believe that the GROUPER logic for DRGs 474 and 475 should be applied whenever prolonged ventilation is involved, regardless of where the intubation or tracheostomy was performed. This is a logical argument, since a hospital will very likely use as many resources in treating a ventilator patient who was intubated or received a tracheostomy in an ambulance or in another hospital's emergency room. Many hospitals requested a waiver of the rules governing billing and payment for inpatient and outpatient services under both parts A and B of Medicare. In the current situation, the stay in a second hospital will not be assigned DRG 474 or 475, respectively, since the procedures necessary for this assignment are not performed on an inpatient of that hospital and, thus, cannot be coded on the hospital's bill.

At least one of the situations that governed the development of these DRGs has changed since October 1987, and we proposed to revise DRG 475 to address the problems that hospitals have experienced with transfer and emergency room patients. As we stated above, procedure code 93.92 was revised beginning with discharges occurring on or after October 1, 1988 to "Other mechanical ventilation." More significant is the fact that continuous positive airway pressure was reclassified to its own code, 93.90, at that time. Since procedure code 93.92 now refers to other mechanical ventilation, we proposed to revise DRG 475 to remove the requirement of the coding of the insertion of an endotracheal tube. This would mean that cases would be assigned to DRG 475 when a ventilator patient with a principal diagnosis in MDC 4 is intubated elsewhere and no tracheostomy or operating room procedure is performed during the stay at the hospital. When a patient is admitted with an established tracheostomy, the receiving hospital would be paid under DRG 475 if the principal diagnosis is classified in MDC 4, the patient receives mechanical ventilation, and no operating room procedures were performed during the stay in the receiving hospital.

We recognize that ventilator cases in other MDCs tend to be more resource intensive than other cases within the same DRG. There is, however, no agreement as to the mechanism to be used in classifying them. Although NAMDRC has recommended that there be one ventilator DRG for all MDCs with a weight somewhere between that of DRGs 474 and 475, we are concerned that a single ventilator DRG for all MDCs may not be appropriate unless it is based upon an objective measure of the ventilator time involved, independent of the procedures performed.

Studies by the Yale DRG Refinement Project and by Health Systems International (HSI) under its contract with HCFA have both constructed models with DRGs for tracheostomies involving other than MDC 4 cases. We intend to analyze the impact these alternative models would have on the DRG classification system.

Comment: Several commenters expressed support for our proposal to remove the requirement that 96.04 (Insertion of endotracheal tube) must be coded with procedure code 93.92 (Other mechanical ventilation) for a case to be assigned to DRG 475 (Respiratory System Diagnosis with Ventilator Support). One commenter mentioned the need to evaluate whether the payment rate for DRG 475 is adequate for cases involving ventilator patients admitted with an established tracheostomy. However, ProPAC commented that its analysis indicated that the resource costs of the receiving hospital for patients transferred with a tracheostomy were similar to those for transfer cases involving mechanical ventilation without a tracheostomy.

Response: We will continue to monitor DRG 475 to evaluate the impact on the DRG of both removing the requirement that procedure code 96.04 be coded with procedure code 93.92 and of assigning patients admitted with an established tracheostomy to this DRG. However, we note that the information

needed to assign those ventilator patients who were admitted with an established tracheostomy to a different DRG than ventilator patients who were intubated in an ambulance or at another hospital (that is, patients without a tracheostomy) is not available from the inpatient bill. This is because the procedures necessary to make this distinction were not performed during the hospital admission in question and, thus, cannot be coded on the hospital's bill. The bills for both sets of patients will show procedure code 93.92 only.

Comment: We received several comments concerning whether the length of time patients spend on a ventilator should be measured and taken into account in the DRG classification of ventilator patients. Several commenters expressed support for the modification of the existing ventilator procedure codes or development of new codes and DRGs that would reflect the length of ventilator time. However, other commenters opposed adding another digit to the ventilator procedure codes to identify the length of time spent on a ventilator in the belief that it would defeat the purpose of coding classification. That is, these commenters suggested that other data set fields should be used for furnishing this information because a disease classification system cannot provide details of treatment. One commenter suggested that if a length of time indicator is used, the length of time should be defined as the time period from the beginning of ventilation to the final cessation, regardless of any breaks for short periods of time.

Response: The ICD–9–CM Coordination and Maintenance Committee, which has the responsibility for maintaining and updating the ICD–9–CM codes, discussed this issue at its latest meeting, which was held August 10 and 11, 1989. A decision will be made on this issue before next year's ICD–9–CM coding changes are made. Interested parties are encouraged to submit their comments to the Committee at the address below before December 31, 1989.

Comment: Several commenters expressed their opinion that DRGs 474 and 475 should be expanded to include ventilator cases outside MDC 4 because ventilator cases in other MDCs tend to be more resource intensive than other cases in the same DRG. One commenter was concerned that the expansion of DRGs 474 and 475 might be delayed if it were linked to implementation of the recommendations of the Yale DRG Refinement Project.

Response: As indicated in the proposed rule (54 FR 19639), we recognize that ventilator cases in other MDCs tend to be more resource intensive than other cases within the same DRG and we intend to analyze the impact that alternative models for assigning ventilator cases would have on the DRG classification system. This was not, however, an analysis we could complete in time to consider changes in the classification of ventilator cases in FY 1990.

Although one alternative was developed as part of the Yale DRG Refinement Project, it could be implemented independently of the other DRG refinements recommended in the Yale study. Similarly, implementation of other DRG refinements recommended by the Yale study would not necessitate the adoption of the Yale model for ventilator cases should our analysis determine that a different model would be more appropriate.

Comment: One commenter incorrectly interpreted our proposed policy to mean that a ventilator patient who is transferred or intubated elsewhere would still be assigned to DRG 475 if a tracheostomy were performed at the receiving hospital.

Response: The proposed change addressed the situation where a patient in MDC 4 could not be assigned to a DRG 475 because only procedure code 93.92 (Other mechanical assistance ventilation) was shown on the bill. It does not affect the classification of patients in MDC 4 undergoing a tracheostomy at the receiving hospital since these patients would have one of the tracheostomy procedure codes shown on the bill and would continue to be assigned to DRG 474 as before.

As stated in the proposed rule, the receiving hospital would be paid under DRG 475 when a patient is transported with an established tracheostomy or was intubated elsewhere, the principal diagnosis is classified in MDC 4, the patient receives mechanical ventilation, and no operating procedures were performed during the stay in the receiving hospital. We included the criterion that no operating procedures be performed during the stay because patients on mechanical ventilation who receive an operating room procedure are not assigned to DRG 475. We did not intend to imply that those patients who received a temporary tracheostomy, which is a nonoperating room procedure, would also be assigned to DRG 475. Cases with a principal diagnosis in MDC 4 and one of the tracheostomy procedure codes (31.1, 31.21, or 31.29) will continue to be assigned to DRG 474. We also wish to clarify that cases with code 93.90 (Continuous positive airway pressure) will no longer be assigned to DRG 475 unless the patient also received 93.92 during the stay.

3. Surgical Hierarchies

Some inpatient stays entail multiple surgical procedures, each one of which, occurring by itself, could result in assignment of the case to a different DRG within the MDC to which the particular principal diagnosis is assigned. It is therefore necessary to have a decision rule by which these cases are assigned to a single DRG. The surgical hierarchy, an ordering of groups of procedures from most to least resource intensive, performs that function. Its application ensures that cases involving multiple surgical procedures are assigned to the DRG associated with the most resource-intensive procedure group.

Because the relative resource intensity of procedure groups can shift as a function of DRG reclassification and recalibration, we reviewed the surgical hierarchy of each MDC, as we have for previous reclassifications, to determine if the ordering of procedures coincided with the intensity of resource utilization, as measured by the same billing data used to compute the DRG relative weights.

The surgical hierarchy is based upon procedure groups. Consequently, in many cases, hierarchy has an impact on more than one DRG. The methodology for determining the most resource-intensive procedure groups, therefore, involves weighting each DRG for frequency to determine the average resources for each procedure group. For example, assume procedure group A includes DRGs 1 and 2 and procedure group B includes DRGs 3, 4, and 5, and that the weighting factor for DRG 1 is higher than that for DRG 3, but the weights for DRGs 4 and 5 are higher than the weight for DRG 2. To determine the surgical hierarchy, we would weight the weighting factor of each DRG by frequency to determine average resource consumption for the group of procedures and order the procedure groups from that with the highest to that with the lowest average resource utilization, with the exception of "other (OR) procedures."

The "other OR procedures" group is uniformly ordered last in the surgical hierarchy of each MDC in which it occurs regardless of the fact that the weighting factor for the DRG or DRGs in that procedure group may be higher than that for other procedure groups in the

MDC. The "other OR procedures" group is a group of procedures that are least likely to be related to the diagnoses in the MDC but are occasionally performed on patients with these diagnosis. Therefore, these procedures should only be considered if no other procedure more closely related to the diagnoses in the MDC has been performed.

Based on the preliminary recalibration of the DRGs, we proposed to modify the surgical hierarchy as set forth below. As discussed below in section II.C. of this preamble, the final recalibrated weights are somewhat different from those proposed since they are based on more complete data. Consequently, we have further revised the hierarchy in this final rule as described below.

We proposed to revise the surgical hierarchy for MDC 5 (Diseases and Disorders of the Circulatory System) and MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue) as follows:

a. In MDC 5, we proposed to reorder Cardiac Pacemaker Replacement and/or Revision (DRGs 117 and 118) [1] above Vascular Procedures Except Major Reconstruction Without Pump (DRG 112).

b. In MDC 8, we proposed to reorder Biopsies (DRG 216) above Back and Neck Procedures (DRGs 214 and 215); and we proposed to reorder Arthroscopy (DRG 232) above Major Shoulder/Elbow Procedures or Other Upper Extremity Procedures With CC (DRG 223).

We received no comments concerning the proposed reordering within the surgical hierarchy of MDC 5 and we are making this change as proposed. We did, however, receive one comment on another issue concerning MDC 5 as well as two other comments, one on our proposed reordering of the surgical hierarchy of MDC 8 and one general comment.

Comment: One commenter noted that there were no changes in the number of cases shown on Tables 7A and 7B for DRGs that would be affected by a surgical hierarchy change. The commenter questioned whether the surgical hierarchy changes were reflected in the case counts and relative weights published in the proposed rule.

Response: The surgical hierarchy changes in the proposed rule are based on our preliminary recalibration of the DRG weights. We are not able to test the effects of the revisions and to reflect them in the proposed relative weights due to the unavailability of revised GROUPER software at the time of publication. Rather, in performing analysis of the surgical hierarchies, we simulate most major classification changes to approximate the placement of cases under the proposed reclassification and then recalibrate the weights. The weighting factor for each procedure group then serves as our best estimate of relative resource use for that procedure group. We test the proposed surgical hierarchy changes after the revised GROUPER is received and reflect the final changes to the surgical hierarchy in the DRG relative weights published in the final rule.

Comment: We received a number of comments questioning the appropriateness of the proposed reordering of DRG 216 above DRGs 214 and 215. The commenters believe that biopsies are less resource intensive than many of the procedures in DRGs 214 and 215.

Response: Although biopsy procedures may be less resource intensive than many of the surgical procedures in DRGs 214 and 215, we proposed the surgical hierarchy change because our data indicated cases requiring a biopsy are more resource intensive than cases in DRGs 214 and 215. Prior to making the surgical hierarchy change, the average standardized charges for cases in DRG 216 were $700 more than the average standardized charges for cases in DRGs 214 and 215. After reordering the surgical hierarchy, the difference increases to $1,245. We are making the surgical hierarchy change as proposed so that cases with multiple procedures will be assigned to the higher-weighted DRG; however, we will review the MDC 8 surgical hierarchy again next year.

Comment: We received two comments indicating that the change in the surgical hierarchy order for MDC 5 that was made in the September 30, 1988 final rule (53 FR 38485) and was effective October 1, 1988 has resulted in disputes between PROs and hospital medical records administrators as to the proper sequence for surgical procedures on the Medicare bill. This change was to reorder DRG 108 (Other Cardiothoracic or Vascular Procedures With Pump) above DRGs 106 and 107 (Coronary Bypass). The commenters requested that the surgical hierarchy change be reversed. We received two related comments expressing concern over the limited number of procedure codes that can be shown on the Medicare bill.

Response: The problem identified with DRGs 106 and 108 stems from the procedure code sequencing when more than three cardiac procedures are performed, including codes 36.10 through 36.19 (Coronary bypass graft). Although more than three procedures may be performed on the patient, only three may be reported on the bill and the DRG assignment and payment are based on the three reported procedures. For example, a patient may have had a coronary bypass graft, but the claim may show only code 37.61 (Pulsation balloon), code 37.21 (Cardiac catheterization), and code 39.61 (extracorporeal circulation). In this situation, the case would be assigned to the higher-weighted DRG 108 instead of DRG 106 or 107.

If there are a greater number of procedures performed than can be listed on the claim, our coding guidelines require that the procedure be reported based on the follow hierarchy:

—Procedures that relate to the principal diagnosis and that affect DRG assignment.
—Other procedures that affect DRG assignment.
—Other procedures which are listed in the ICD–9–CM (Volume 3, Procedures) between code numbers 01.01 and 86.99 which are performed in the operating room.

Based on the coding guidelines, we would normally expect to see the coronary bypass procedure coded on the claim. Although the ICD–9–CM lists code 39.61 as a "code also" peripheral procedure to the coronary bypass procedures, the GROUPER logic for DRGs 106 and 107 does not require the coding of the pump for DRG assignment. However, the FY 1989 surgical hierarchy change has created an incentive to leave the bypass procedure off the bill to allow room for 39.61 and other procedures that will result in the case being assigned to the higher-weighted DRG 108. This is a particular problem when a DRG software package is used that contains a resequencing function that will search for codes following the DRG logic trees found in the DRG Definitions Manual. Since the hierarchy change, when procedure codes entered by the hospital's medical records department include codes assigned to DRG 108, the programs will check for code 39.61 (Extracorporeal circulation) before assigning the case to a DRG ranked lower in the hierarchy. Frequently, the procedure codes that are assigned to DRG 108 are incidental to a coronary bypass procedure. In this regard, it is important for users of these packages to be aware of the capabilities of their system and ensure that the sequence of the procedures established by the medical records coder and the

[1] A single title combined with two DRG numbers is used to signify pairs, the first DRG of which is cases with CC and the second of which is cases without CC. If a third number is included, it represents cases of patients who are age 0–17.

attesting physician is the sequence that is ultimately reported on the claim form.

We are aware of the difficulties that have developed in the coding and billing of these DRGs since the surgical hierarchy was changed. We are also concerned over the continued loss of data on the incidence of coronary bypass surgery in conjunction with the cardiothoracic and vascular procedures classified in DRG 108 as well as the loss of clinical coherence as increasingly more coronary bypass cases are assigned to DRG 108. However, we do not believe it would be appropriate to reverse the surgical hierarchy. We made the surgical hierarchy change in FY 1989 because the relative resource intensity of the cases assigned to DRG 108 had increased relative to the weighted average of those cases containing the procedure codes necessary for assignment to DRG 106 or 107. The pre-FY 1989 surgical hierarchy no longer resulted in the assignment of cases involving multiple procedure codes to the DRG associated with the most resource intensive procedure group. The FY 1988 data indicate the DRG 108 cases are still more resource intensive. The average standardized charges for cases in DRG 108, based on the current surgical hierarchy, are $3,400 higher than the weighted average standardized charges for cases in DRGs 106 and 107. We intend to re-examine this problem as part of our analytic agenda for FY 1991.

Finally, we believe that it would be advantageous to include more fields on the Medicare claim form to allow the hospital to enter both additional diagnoses and procedure codes. We plan to approach the National Uniform Bill Committee this year to request that they revise the Uniform Bill at the next available opportunity. This recommendation will, of course, be subject to the approval of the other members of the committee.

Since we published the proposed rule, we have received a revised GROUPER program and a more complete 1988 Medicare provider analysis and review (MEDPAR) file, and we were able to test the proposed surgical hierarchy changes. Test results indicated that two changes are necessary.

We regrouped the MDC 8 DRGs using the two proposed hierarchy changes to determine whether the standardized charges involved would continue to exceed that of the DRGs that are currently ranked above them in the hierarchy. We found that our proposal to reorder DRG 232 (Arthroscopy) produced anomalous results. We found that the number of patients classified in DRG 232 would increase seven-fold when the procedure group was moved up in the hierarchy. This result indicates that arthroscopy is more frequently performed in conjunction with a procedure from one of the groups for DRGs 221 and 222 (Knee Procedures), DRGs 226 and 227 (Soft Tissue Procedures), DRGs 230 and 231 (Local Incision and Removal of Internal Fixation Devices), and DRG 228 (Major Thumb or Joint Procedures or Other Hand or Wrist Procedures with CC) than it is performed by itself.

The fact that DRG 232 would pick up so many cases in and of itself is not troubling. However, the reassignment of so many cases results in a weighting factor that no longer supports the proposed surgical hierarchy change. The cases in the FY 1988 MEDPAR that would be assigned to DRG 232 if we changed the order as proposed would have an average standardized charge that would move the DRG back to its current ranking on the surgical hierarchy. It appears that the average Medicare beneficiary who undergoes arthroscopic surgery is often in an advanced stage of degenerative bone or joint disease, resulting in consistently high charges in those cases that do not include other MDC 8 surgeries. The data show that in the situation where arthroscopy is one of multiple procedures performed, the resource intensity of the case is not as high as when arthroscopy is the only procedure performed. Based on these results, we have decided not to implement the proposed reordering of DRG 232.

However, we found from analysis of the revised GROUPER program that another change in MDC 8 surgical hierarchy is necessary due to the revision of the arthroplasty codes and the assignment of the following ICD-9-CM procedure codes to DRG 209 effective October 1, 1989. Currently, all procedures involving shoulder arthroplasty and elbow arthroplasty are assigned to DRG 223 (Major Shoulder/Elbow Procedures or Other Upper Extremity Procedures With CC). With the code revisions, code 81.80 (Total shoulder replacement), 81.81 (Partial shoulder replacement), and 81.84 (Total elbow replacement) will be assigned to DRG 209 (Major Joint and Limb Reattachment Procedures). Consequently, the charges remaining in the cases classified in DRG 223, representing the less complicated arthroplasties, fell to a rank below DRG 231 (Local Excision and Removal of Internal Fixation Devices, Except Hip and Femur). As a result, we are revising the hierarchy in MDC 8 to reorder DRG 223 below DRG 231 and above DRG 228. Based on these changes, the final MDC 8 surgical hierarchy is as follows:

Bilateral or Multiple Major Joint Procedures of the Lower Extremity (DRG 471)
Wound Debridement and Skin Graft Except Hand (DRG 217)
Major Joint and Limb Reattachment Procedures (DRG 209)
Hip and Femur Porcedures Except Major Joint (DRGs 210, 211, and 212)
Amputations (DRG 213)
Biopsies (DRG 216)
Back and Neck Procedures (DRGs 214 and 215)
Lower Extremity and Humerus Procedures Except Hip, Foot, Femur (DRGs 218, 219 and 220)
Knee Procedures (DRGs 221 and 222)
Soft Tissue Procedures (DRGs 226 and 227)
Local Excision and Removal of Internal Fixation Devices of Hip and Femur (DRG 230)
Local Excision and Removal of Internal Fixation Devices Except Hip and Femur (DRG 231)
Major Shoulder/Elbow Procedures or Other Upper Extremity Procedures With CC (DRG 223)
Major Thumb or Joint Procedures or Other Hand or Wrist Procedures With CC (DRG 228)
Arthroscopy (DRG 232)
Foot Procedures (DRG 225)
Shoulder, Elbow or Forearm Procedures Except Major Joint Procedures Without CC (DRG 224)
Hand or Wrist Procedures Except Major Joint Procedures Without CC (DRG 229)
Other Musculoskeletal System and Connective Tissue OR Procedures (DRGs 233 and 234)

4. Refinement of Complications and Comorbidities List

There is a standard list of diagnoses that are considered complications and comorbidities (CCs). This list was developed by physician panels to include those diagnoses that, when present as a secondary condition, would be considered a substantial complication or comorbidity. A substantial CC, in turn, is defined as a condition that, because of its presence with a specific principal diagnosis, would cause an increase in length of stay by at least one day for at least 75 percent of the patients.

Based upon analysis by our medical consultants, we proposed to eliminate the following minor cardiac block and dysrhythmia diagnoses from the CC list:

426.10 Atrioventrical block, not otherwise specified (NOS)
426.11 Atrioventrical block, 1st degree

426.12 Atrioventrical block—Mobitz (type) II
426.13 Atrioventrical block, 2nd degree, not elsewhere classified (NEC)
426.2 Left bundle branch hemiblock
426.3 Left bundle branch block NEC
426.4 Right bundle branch block
426.50 Right bundle branch block NOS
426.51 Right bundle branch block and left posterior fascicular block
426.52 Right bundle branch block and left anterior fascicular block
426.53 Bilateral bundle branch block NEC

Each of these procedures would no longer be considered a CC for any principal diagnosis.

Comment: A number of comments were received recommending retention of some or all of the codes in the CC list or supporting deletion of all of the codes as proposed. One commenter suggested deleting an additional code, 426.9 (Conduction disorder, unspecified). The commenter believes the diagnosis to be rather nonspecific except for interventricular conduction delay (in the alphabetical list of the ICD–9–CM), which is not a significant cardiac defect. In the tabular list (of the ICD–9–CM), however, there are two conditions the commenter believes to be highly significant and suggested interventricular conduction defect may best be reclassified to another ICD–9–CM code.

Response: After further discussion with medical consultants, we agree with several commenters that there may be added risk with diagnosis codes 426.12, 426.13, and 426.53. The remaining codes represent clinical conditions of lesser significance to the patient with acute myocardial infarction, they may or may not be related to the acute myocardial infarction, and they should not cause difficulty in the majority of cases. Therefore, they do not represent comorbidities that can be expected to significantly change resource utilization needs or length of stay. The following is the final list of minor cardiac block and dysrhythmia diagnoses that are deleted from the CC list:

426.10 Atrioventrical block, not otherwise specified (NOS)
426.11 Atrioventrical block, 1st degree
426.2 Left bundle branch hemiblock
426.3 Left bundle branch block, not elsewhere classified (NEC)
426.4 Right bundle branch block
426.50 Right bundle branch block NOS
426.51 Right bundle branch block and left posterior fascicular block
426.52 Right bundle branch block and left anterior fascicular block

We appreciate the commenter's suggestions concerning 426.9, but since we did not propose to eliminate 426.9, we do not believe it would be appropriate to act on the suggestion at this time. We recommend that the commenter submit it to the ICD–9–CM Coordination and Maintenance Committee for consideration (see address below in section II.B.6. of this preamble).

We proposed a limited revision of the CC Exclusion List, which includes corrections of errors in the existing list, addition of a number of excluded CCs, and the deletion of a number of excluded CCs.

Table 6f in section IV of the addendum to the proposed rule contained the proposed additions to the CC Exclusions List that would be effective for discharges occurring on or after October 1, 1989. The table shows the principal diagnoses with proposed changes to the excluded CCs. Each of these principal diagnoses was shown with an asterisk and the additions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis. The indented diagnosis would not be recognized by the GROUPER as a valid CC for the asterisked principal diagnosis beginning with discharges on or after October 1, 1989.

In the proposed rule, many four-digit diagnosis codes on the master CC list were included on Table 6d (Expanded Diagnosis Codes That Are No Longer Accepted In GROUPER) since they have been replaced by two or more five-digit diagnosis codes. Since the five-digit definitions provide greater specificity in classifying the diagnoses, some of the new codes will no longer describe a CC or will describe a CC in a four-digit category that was not previously on the CC list.

Example

*25060
34501
34510
34511

The four-digit diagnosis code 3450 (Generalized nonconvulsive epilepsy) was not on the master CC list while 3451 (Generalized convulsive epilepsy) was on the list. Code 3451 was excluded as a CC for the principal diagnosis 25060 (Diabetes with neurological manifestations, adult or unspecified onset) for discharges occurring on or after October 1, 1988. Beginning with discharges on or after October 1, 1989, the ICD–9–CM adds a fifth digit designating whether or not intractable epilepsy is involved. The four-digit diagnosis codes are eliminated wherever they occurred on the Exclusion List. Both of the five-digit codes 34510 and 34511 are added to the Exclusion List in place of 3451. Even though the code 3450 was not considered a CC, 34501 (Generalized convulsive epilepsy with intractable epilepsy) is considered a CC and is added to the master list. Code 34501 will be excluded as a CC for the principal diagnosis 25060.

Comment: Several commenters suggested that codes from the Excludes Note, as set forth in the ICD–9–CM, for diagnosis code 496 (Chronic obstructive pulmonary disease) be added to the CC Exclusions List to improve coding consistency and accuracy.

Response: While we encourage efforts to ensure correct coding and consistent use of ICD–9–CM principles, we do not see the CC Exclusion List as the most appropriate vehicle to ensure this consistency. Furthermore, of the codes mentioned in the Excludes Notes, only two have payment implications and one of these will be changed as of October 1, 1989. However, we understand the commenter's point and as we do more extensive work on the CC list, we will consider ICD–9–CM coding conventions.

Comment: One commenter wanted to know if code 493.20 (Chronic obstructive asthma) will be considered as a comorbid condition and requested clarification regarding the combination of codes 493.90 (Asthma unspecified) and 492 (Emphysema), asking if it becomes part of 493.20.

Response: Diagnostic code 493.20 will be considered as a complication or comorbid condition and will be added to the CC list. The question as to how to code the combination of asthma and emphysema is answered in the final ICD–9–CM coding Addendum for October 1, 1989. Each diagnosis should be coded separately, as they are now.

The only CCs that we proposed to delete from the CC Exclusions List are those deleted diagnosis codes in Table 6d that are currently on the CC list and those diagnosis listed above that we proposed to delete from the main CC list. As proposed, the following diagnoses codes from Table 6d should be deleted from the CC list and wherever they appear on the CC Exclusions List: 345.1; 403.0; 404.0; 410.0–410.9; 411.8; 996.6; and 996.7. For the convenience of the reader, we have included a complete list of the deletions in Table 6g of the addendum to this final rule.

Copies of the original CC Exclusions List applicable to FY 1988 can be obtained from the National Technical Information Service (NTIS) of the Department of Commerce. It is available in hard copy for $64.95 and on

microfiche for $18.50. These prices include $3.00 for shipping and handling. A request for the FY 1988 CC Exclusions List, which should include the identification accession number (PB) 88–133970, should be made to the following address:

National Technical Information Service, United States Department of Commerce, Springfield, Virginia 22161; or by calling (703) 487–4650.

Users should be aware of the fact that both the revisions in Tables 6d and 6e of the September 30, 1988 final rule and those in Table 6f and 6g of this document must be incorporated into the list purchased from NTIS in order to obtain the CC Exclusions List applicable for discharges occurring on or after October 1, 1989. (We do not intend to update the listing available from NTIS to reflect these or any future revisions.)

Alternatively, the complete documentation of the GROUPER logic, including the current CC Exclusions List is available from Health Systems International (HSI). HSI, under contract with HCFA, is responsible for updating and maintaining the GROUPER program. The current DRG Definitions Manual, Sixth Revision is available for $195.00, which includes $15.00 for shipping and handling. The Sixth Revision of this manual includes the changes in this document. This manual may be obtained by writing HSI at: 100 Broadway, New Haven, Connecticut 06511; or by calling (203) 562–2101.

5. Review of Procedure Codes in DRGs 468 and 477

Each year, we review cases assigned to DRG 468 (Unrelated Operating Room Procedures) in order to determine whether, in conjunction with certain principal diagnoses, there are certain procedures performed that are not currently included in the surgical hierarchy for the MDC in which the diagnosis falls. In FY 1989, this review resulted in the addition of two new DRGs: DRG 476 (Prostatic OR Procedure Unrelated to Principal Diagnosis) and DRG 477 (Non-Extensive OR Procedure Unrelated to Principal Diagnosis). For a detailed discussion of the changes, see the September 30, 1988 final rule (53 FR 38487).

Since DRG 468 is reserved for those cases in which none of the OR procedures is related to the principal diagnosis, it is intended to capture atypical medical cases, that is, those cases not occurring with sufficient frequency to represent a distinct recognizable clinical group. DRGs 476 and 477 are assigned to specific subsets of these codes. DRG 476 is assigned to those discharges in which one of the following prostatic procedures is performed that is unrelated to the principal diagnosis:

60.2—Transurethral prostatectomy
60.61—Local excision of lesion of prostate
60.69—Prostatectomy NEC
60.94—Control of postoperative hemorrhage of prostate

DRG 477 is assigned to those discharges in which the only procedure performed is a nonextensive procedure that is unrelated to the principal diagnosis. In Table 6c in section IV of the addendum to the September 30, 1988 final rule, we listed the ICD–9–CM procedure codes for all of the procedures we consider nonextensive procedures if performed with an unrelated principal diagnosis. These cases are grouped in DRG 477.

Because of the addition of DRG 477, we conducted this year's review of procedures producing DRG 468 or 477 assignments on the basis of volume of cases with each procedure. Our medical consultants then identified those procedures occurring in conjunction with certain diagnoses with sufficient frequency to justify adding them to one of the surgical DRGs for the MDC in which the diagnosis falls. On the basis of this review, we proposed two DRG classification changes in order to reduce unnecessary assignment of cases to DRG 477.

In MDC 14 (Pregnancy, Childbirth and Puerperium), we proposed to add two procedure codes to the operating room procedures in DRG 374 (Vaginal Delivery With Sterilization and/or D&C). Currently these procedures, when combined with a principal diagnosis in MDC 14 such as 665.41 (High vaginal laceration), group to DRG 477. The two procedure codes to be added to DRG 374 are procedure codes 69.09 (Other dilation and curettage) and 69.52 (Aspiration curettage following delivery or abortion).

Comment: Several commenters objected to the addition of procedure code 69.09 (Other dilation and curettage) to DRG 374. The commenters noted that this procedure code should not be used with DRG 374 because there is a specific procedure code (69.02) for D&C following delivery. Since it would be inappropriate to use 69.09 to indicate a D&C following delivery, the procedure code should not be added to DRG 374.

Response: We agree with the commenters that procedure code 69.09 should not be used to code a D&C following delivery and that the correct code would be 69.02. However, the purpose of including 69.09 in DRG 374 is to address those occasions when this procedure code is nevertheless used with a principal diagnosis assigned to DRG 374. These cases currently group to DRG 477 (Non-Extensive OR Procedure Unrelated to Principal Diagnosis); they more appropriately belong in DRG 374 because 69.09 is not an unrelated procedure. Therefore, we are including procedure code 69.09 in DRG 374.

Comment: We have received several complaints that when splenectomy (codes 41.5 or 41.43) is performed for Felty's syndrome, which is an appropriate procedure for this syndrome, it inappropriately groups to DRG 468 (Extensive OR Procedure Unrelated to Principal Diagnosis).

Response: We agree with the commenters that this is an incorrect grouping and have assigned procedure codes 41.5 and 41.43 to MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue) in order to group to the appropriate DRGs 233 and 234 (Other Musculoskeletal System and Connective Tissue OR Procedure).

6. Changes to the ICD–9–CM Coding System.

As discussed above in section II.B.1. of this preamble, ICD–9–CM is a coding system for the reporting of diagnostic information and procedures performed on a patient. In September 1985, the ICD–9–CM Coordination and Maintenance Committee was formed. This is a Federal interdepartmental committee charged with the mission of maintaining and updating the ICD–9–CM. This includes approving new coding changes, developing errata, addenda, and other modifications to the ICD–9–CM to reflect newly developed procedures and technologies and newly identified diseases. The Committee is also responsible for promoting the use of Federal and non-Federal educational programs and other communication techniques with a view toward standardizing coding applications and upgrading the quality of the classification system.

The Committee is co-chaired by the National Center for Health Statistics (NCHS) and HCFA. The NCHS has responsibility for the ICD–9–CM diagnoses codes included in Volumes 1 and 2—Diseases: Tabular List and Diseases: Alphabetic Index, while HCFA has responsibility for the ICD–9–CM procedure codes included in Volume 3—Procedures: Tabular List and Alphabetic Index.

The Committee encourages participation in the above process by major health-related organizations. In this regard, the Committee holds public meetings for discussion of educational

issues and proposed coding changes. These meetings provide an opportunity for input into coding matters from representatives of recognized organizations in the coding fields, such as the American Medical Record Association, the American Hospital Association, and the Commission on Professional and Hospital Activities, as well as physicians, medical record administrators, and other members of the public. Considering the opinions expressed at the public meetings, the Committee formulates recommendations, which then must be approved by the agencies.

The Committee presented proposals for coding changes at public meetings held on April 14, 1988, July 21–22, 1988, and December 1, 1988 and finalized the coding changes after consideration of comments received at the meetings and in writing in the 30 days following the December 1, 1988 meeting. The initial meeting for consideration of coding issues for resolution in FY 1990 was held on April 4, 1989 and a second meeting was held August 10–11, 1989. Copies of the minutes of these meetings may be obtained by writing to the co-chairpersons representing NCHS and HCFA. We encourage commenters to address suggestions on coding issues involving diagnosis codes to:

Ms. Sue Meads, R.R.A, Co-Chairperson, ICD–9–CM Coordination and Maintenance Committee, NCHS, Rm 2–19, Center Building, 3700 East-West Highway, Hyattsville, Maryland 20782.

Questions and comments concerning the procedure codes should be addressed to:

Ms. Patricia E. Brooks, R.R.A., Co-Chairperson, ICD–9–CM Coordination and Maintenance Committee, HCFA, Office of Coverage Policy, Rm 1–J–2 East Low Rise Building, 6325 Security Boulevard, Baltimore, Maryland 21207.

The additional new ICD–9–CM codes that have been approved will become effective October 1, 1989. The new ICD–9–CM codes are listed, along with their DRG classifications, in Tables 6a, 6b, and 6c in section IV of the addendum.

Further, the ICD–9–CM diagnosis codes shown on Table 6d will be expanded to categories requiring a fifth digit for valid diagnosis code assignment. Thus, these diagnosis codes will not be recognized by GROUPER 7 beginning with discharges occurring on or after October 1, 1989. The corresponding five-digit codes are shown in Table 6a. Finally, the ICD–9–CM procedure codes shown in Table 6e will be deleted. These codes were vacated because of the new and revised codes established by the Committee and will be reserved for future refinements of the ICD–9–CM.

Comment: Several commenters noted errors in Tables 6a, 6b, 6c, 6d, and 6e as set forth in section IV of the addendum to the proposed rule (54 FR 19709–19712). Specifically mentioned was the assignment of procedure codes 77.56 (Repair of hammer toe) and 77.57 (Repair of claw toe) to DRG 63 (Other Ear, Nose, Mouth and Throat OR Procedures).

Response: We have revised Tables 6a, 6b, 6c, 6d, and 6e to reflect the correct spelling, additions, deletions, and DRG assignments. Tables 6a, 6b, 6c, 6d, and 6e should now be correct as set forth in section IV of the addendum to this final rule.

Comment: One commenter asked which of the new diagnosis codes from Table 6a would be added to the CC list.

Response: We have revised Table 6a as set forth in section IV of the addendum to this final rule to add a yes/no column for CCS that will indicate for each of the new diagnoses listed whether or not it is considered a CC.

Comment: Two commenters questioned the assignment of procedure codes 81.57 (Replacement of joint of foot or toe), 81.72 (Arthroplasty of metacarpophalangeal and interphalangeal joint without implant), 81.74 (Arthroplasty of carpocarpal or carpometacarpal joint with implant), and 81.75 (Arthroplasty of carpocarpal or carpometacarpal joint without implant) to DRGs 7 and 8 (Peripheral and Cranial Nerve and Other Nervous System Procedures).

Response: Code 81.57 was incorrectly shown as assigned to DRGs 7 and 8 due to an error in Table 6b in the proposed rule (54 FR 19711). This has been corrected and now is shown assigned to DRG 225 (Foot Procedures) and DRGs 442 and 443 (Other OR Procedures for Injuries) in Table 6b. Codes 81.72, 81.74, and 81.75 are assigned to DRGs 7 and 8 because joint surgery may be performed in a neurologically deficient and unstable hand.

Comment: Three commenters questioned the assignment of code 996.73 (Other complications due to renal dialysis device, implant and graft) to DRGs 144 and 145 (Other Circulatory System Diagnoses). They recommended that it group to DRGs 331, 332, and 333 (Other Kidney and Urinary Tract Diagnoses) because this is a complication of a vascular prosthetic device that is a renal dialysis device.

Response: Code 996.73 is a general category of diagnoses including vascular implants or grafts that may be associated with many different medical conditions. We find no medical or coding rationale for further DRG differentiation. Code 996.73 will remain assigned to DRG 144 and 145.

Comment: Several commenters supported the new ICD–9–CM codes for intractable epilepsy as a separate diagnosis and the new codes for procedures performed in the diagnosis of people with intractable epilepsy. They stated that by differentiating between intractable epilepsy and routine epilepsy, the new diagnosis codes recognize the varying severity of epilepsy. The commenters also pointed out that these new diagnosis codes will provide the first opportunity to identify this group of patients and to distinguish between routine epilepsy admissions and the far more resource intensive admissions for intractable epilepsy. They recommended that we recognize the far higher cost of intractable epilepsy cases and establish more appropriate payment than exists under the current DRGs. The commenters also expressed concern that insufficient Medicare payments may limit access to needed diagnostic procedures and treatment.

Response: We appreciate the input from these commenters and their support for the new diagnosis codes (345.00 through 345.91) and procedure codes (88.10 and 89.19), as well as their concern and request for further refinements in the classification and payment of intractable epilepsy cases. With these new codes, we will be able to collect and evaluate data concerning resource requirements for patients with intactable epilepsy compared to patients with routine epilepsy and to determine whether any additional classification changes should be proposed.

Comment: One hospital raised a question about the use of the new diagnosis code 411.81 (Acute ischemic heart disease without myocardial infarction) in the case of those patients who had an embolism or occlusion (diagnosed by EKG) but were so successfully treated with tissue plasminogen activator (TPA) or a similar pharmacologic preparation that no infarction resulted.

Response: Clarification of the new diagnosis code 411.81 resolves this issue. This code is for acute ischemic heart disease without myocardial infarction and includes coronary occlusion from embolus or clot formation resulting in ischemia but not infarction.

If a myocardial infarction is diagnosed either by clinical picture, EKG, or enzymes, it qualifies as an acute myocardial infarction and is assigned to

category 410 (fourth and fifth digits are required). The new diagnosis code 411.81 is reserved for those cases in which no myocardial infarction occurs. In cases in which the EKG indicates occlusion with ischemia but without definitive signs of infarction, this patient would be classified under the new diagnosis code 411.81 (Acute ischemic heart disease without myocardial infarction). If TPA were administered, in the absence of a myocardial infarction, 411.81 would be the correct code.

However, if the patient is diagnosed as having an acute myocardial infarction, the case is coded in the 410 category, even if TPA is administered and restores perfusion in the occluded coronary artery.

Comment: Two commenters supported the new diagnosis codes for acute myocardial infarction and the proposed DRG reassignment for myocardial infarction subsequent episode of care cases to DRGs 132 and 133. However, both commenters expressed concern that the FY 1990 DRG weights for DRGs 121 and 122 (Circulatory Disorders with Acute Myocardial Infarction, Discharged Alive) would be too low for acute cases because they are based on all cases currently assigned to these DRGs. The commenters suggested that an adjustment be made in the weights for DRGs 121 and 122 to reflect the reassignment of less resource-intensive cases to DRG 132 and 133. If the weights are not adjusted, one of the commenters suggested leaving the less resource-intensive cases in DRGs 121 and 122 until the DRG reassignment could be reflected in recalibration.

Response: Effective with discharges on or after October 1, 1989, we are requiring the use of a new fifth digit subclassification within the ICD–9–CM category 410 (Acute myocardial infarction). This subclassification distinguishes an initial episode of care from a subsequent episode of care. A fifth digit of "1" (initial episode of care) is used to designate the acute phase of care regardless of the location of treatment. It includes cases that are transferred for care and treatment within the acute phase of care. Any subsequent episode of care for another myocardial infarction is also assigned a fifth digit of "1." All of these cases will be assigned, as they have been in the past, to one of the myocardial infarction DRGs 121, 122, or 123 (or, in the case with pacemaker implantation, DRG 115).

A fifth digit of "2" is used to designate observation, treatment, or evaluation of myocardial infarction within 8 weeks of onset, but following the acute phase, or in the healing state in which the episode of care may be for related or unrelated conditions. All of these cases will be assigned to one of the atherosclerosis DRGs (132 or 133) if acute myocardial infarction, subsequent episode of care is identified as the principal diagnosis. Our reasons for assigning these cases to the atherosclerosis DRG rather than to a myocardial infarction DRG relate to two of the basic characteristics of the DRG patient classification system. First, each DRG should contain cases with a similar pattern of resource intensity and, second, each DRG should contain cases that are similar from a clinical perspective. We note that cases that would require surgical procedures upon readmission or cases that are readmitted with a complication of myocardial infarction would group to a different MDC 5 DRG.

Without the creation of a new fifth digit subclassification, we would have continued to be unable to distinguish the resource-intensive, clinically-coherent group of patients admitted to the hospital with an acute myocardial infarction from less resource-intensive and clinically-different group of patients who are not suffering an acute myocardial infarction but who are readmitted to the hospital within 8 weeks of a myocardial infarction. Until now, according to ICD–9–CM coding convention, various cases of chronic ischemic heart disease (for example, coronary atherosclerosis) have been classified as acute myocardial infarctions if they occur within 8 weeks of the date of a previous infarction. Thus, cases of acute myocardial infarction have been classified with cases that are not acute myocardial infarctions. This coding convention was developed and is appropriate for mortality reporting purposes but is inappropriate for morbidity reporting purposes. In addition to the problems this coding convention has created for the DRG classification system, it has also distorted the statistical data in the United States concerning the incidence of myocardial infarction.

We believe these problems will be solved by the use of the fifth digit subclassification. However, until the new diagnosis codes are reflected in our MEDPAR data, we are unable to distinguish between the acute and nonacute cases for purposes of recalibration. Thus, as the commenters noted, relative weights for DRGs 121 and 122 are based on the resource requirements for both the high-cost acute myocardial infarction cases and the less resource-intensive nonacute cases that will be paid under DRGs 132 and 133 in FY 1990. The reassignment of the lower cost cases from DRGs 121 and 122 will not be reflected in the DRG weights until FY 1992, when FY 1990 data will be used in recalibration.

We have not adopted either of the commenters suggested alternatives because they are not consistent with our general policy on reclassification and recalibration. When ICD–9–CM diagnosis codes that affect DRG assignment are added, revised, or deleted, we try to take these changes into account in recalibration. To the extent possible, we convert the existing codes into their equivalents under the revised code definitions so that cases including these codes will be classified in their new DRG assignments before recalibration. When we are unable to determine how cases will be coded under the revised definitions, our policy is to leave the cases in their current DRG assignment for recalibration purposes only. We still assign the codes to the appropriate DRG for payment purposes. Because we are unable to predict which cases will no longer be assigned to DRGs 121 and 122 in FY 1990, we have left all acute myocardial infarction cases in DRGs 121 and 122 in recalibrating the weights. In addition, since we cannot predict which cases will no longer be assigned to DRGs 121 and 122 in FY 1990, we have no basis for determining an appropriate adjustment to the DRG weights for DRGs 121 and 122 to reflect the new DRG assignments.

We believe it would be inappropriate to continue assigning the nonacute cases to DRGs 121 and 122 for payment purposes until FY 1992 because it would result in continued excessive payments for the nonacute cases without improving the payment accuracy for the acute cases in DRGs 121 and 122.

Finally, we note that to the extent DRG reclassification and recalibration contribute to a lower case-mix index value in FY 1990 than we projected in normalization, this effect would be taken into account in any future adjustment for the aggregate effects of the FY 1990 GROUPER changes and recalibration on changes in the case-mix index.

Comment: One commenter expressed opposition to our decision to assign cases involving the readmission of patients within 8 weeks of a myocardial infarction to one of the atherosclerosis DRG (132 or 133) rather than to one of the myocardial infarction DRG (121, 122, or 123). The commenter claims that Medicare patients who have had myocardial infarctions can be expected to have increased admissions in the first four weeks following infarction because of complications. The commenter asserted that the resources required to care for this group of patients increases

because of the recent myocardial infarction and, thus, these cases should be assigned to one of the myocardial infarction DRGs.

Response: We acknowledge that some Medicare patients are at risk of complications in the first few weeks after a myocardial infarction. We believe that the commenter may have misinterpreted the proposed rule in which we indicated in Table 6a that the new codes for myocardial infarction, subsequent episode of care would be assigned to one of the atherosclerosis DRGs (132 or 133). The GROUPER will only assign these cases to DRG 132 or 133 if myocardial infarction subsequent episode of care is listed as the principal diagnosis. If the patient is admitted with a complication of myocardial infarction, then the complication would be listed as the principal diagnosis and the patient would be assigned to a DRG other than 132 or 133. It should be noted that we have created two new diagnosis codes (429.71 (Acquired cardiac septal defect) and 429.79 (Other certain sequelae of myocardial infarction, not elsewhere classified)) to allow for accurate reporting of complications of myocardial infarction. These codes are assigned to DRG 124, 144, or 145.

Comment: Several commenters opposed the addition of the new procedure codes specific to alcohol and drug detoxification and rehabilitation (94.61 through 94.69) to DRG 433 (Alcohol/Drug Abuse or Dependence, Left Against Medical Advice). These commenters noted that adding these new procedure codes to DRG 433 was unnecessary because the presence or absence of these procedure codes would not affect assignment to DRG 433.

Response: We agree with the commenters that it is unnecessary to add procedure codes 94.61 through 94.69 to DRG 433. A case in which the patient was discharged from the hospital against medical advice will group to DRG 433 regardless of whether detoxification or rehabilitation has been provided. Therefore, we are not adding procedure codes 94.61 through 94.69 to DRG 433. In addition, we are not adding procedures codes 94.62 (Alcohol detoxification), 94.65 (Drug detoxification), or 94.68 (Combined alcohol and drug detoxification) to the GROUPER logic for DRG 434 or 435. Detoxification procedures should be coded only if provided, but are not required for grouping to DRG 434 or 435. Rehabilitation procedure codes are required for DRG 436; both rehabilitation and detoxification codes are required for DRG 437.

7. Other Issues

a. *Cochlear Implants.* In the September 30, 1988 final rule (53 FR 38476), we agreed to reevaluate the placement of cochlear implant discharges in DRG 49 (Major Head and Neck Procedures) based upon billing data from FY 1988. While cochlear implant cases may not be clinically coherent with other discharges assigned to DRG 49, the FY 1988 Medicare data still do not indicate there would be a material difference in the weighting factors if a separate DRG were created for cochlear implants.

Comment: Several commenters expressed concern that the classification of cochlear implant cases to DRG 49 is inappropriate in terms of both clinical coherency and resource intensity and could limit the availability of cochlear implants to Medicare beneficiaries. One commenter suggested that there are several causes for the low average charges in the MEDPAR data. First, the data reflect the less expensive single-channel device that is no longer manufactured and, as a result, understate the cost of the multi-channel device. Second, the commenter noted that the cost of the device is 84 percent of the charges and maintains that this creates an "expensive device bias" that provides hospitals with little incentive to control the nondevice related expenses and makes cochlear implant procedures not clinically coherent with the other procedures in DRG 49. Finally, the commenter has analyzed the FY 1988 MEDPAR file and alleges that 25 percent of the cases coded as cochlear implants do not reflect the cost of the cochlear implant device. The commenter believes that procedure code 20.96 (Unspecified cochlear implants) has been misused and should be eliminated.

Response: We have re-examined the most recent FY 1988 MEDPAR file and continue to believe that it would not be appropriate to establish a separate DRG for cochlear implant procedures at this time. As indicated in the proposed rule (54 FR 19642), the 113 cases coded as cochlear implants constitute only two percent of the total discharges in DRG 49. Moreover, if we were to remove the cochlear implant cases from DRG 49 and establish a separate DRG based on the FY 1988 MEDPAR data, the weighting factor for cochlear implants would be less than the factor for DRG 49.

We examined the effect the removal of procedure code 20.96 (Implantation or replacement of cochlear prosthetic device NOS) and 20.97 (Single-channel device) would have on the average charges for DRG 49 cases and for cochlear implant cases. We determined that the removal of either or both of these two procedure codes would have no significant impact of the weighting factor for DRG 49. Further, the average charge for cases coded with procedure code 20.98 (Multi-channel device) is less than the average charge for DRG 49 cases. With regard to the commenter's concern that the average charges may be understated because 25 percent of the cases coded as cochlear implants do not reflect the cost of the cochlear implant device, we can only assume that what a hospital submits as its charges on each bill are in fact the actual total charges for the case. A hospital is under no obligation to show charges equal to or greater than its costs for the services.

Finally, we recognize that some hospitals may be experiencing problems with the coding of cochlear implant cases. As an educational effort to encourage proper use of the cochlear implant codes, we are asking the American Hospital Association to address this issue in their coding publication "Coding Clinic for ICD–9–CM". In addition, we will furnish all Peer Review Organizations with a copy of this document for their consideration in reviewing the proper coding and DRG assignment of cases.

b. *Expansion of the List of DRGs Partitioned by Complications and Comorbidities (CCs).* In the September 30, 1988 final rule (53 FR 38491), we agreed to reevaluate the importance of CCs in DRGs not currently partitioned by the presence or absence of CCs. We have funded a number of studies in recent years designed to evaluate and improve the measurement of hospital case mix. In one recently completed study, Yale University has developed a refined DRG system that differentiates patients within each DRG based on whether they had catastrophic, major, moderate, or minor or no CCs.

The DRG refinement model produces significant improvements in predicting resource use and does not represent a radical departure from the current structure of the DRGs nor does it require the collection of any additional data. Although the results of this study appear promising, we are unable to implement the refined DRG system at this time since the appropriateness of the expanded DRGs has not been confirmed. Also, we need to analyze whether adoption of the refined DRG system would require other conforming changes to the payment system (that is, reestimation of the indirect medical education adjustment factor and the disproportionate share adjustment factor and reevaluation of the need for separate urban and rural rates) in order

to mitigate a potentially large redistribution of Medicare payments across different categories of hospitals. We intend to reevaluate the importance of CCs in the nonpaired DRGs as part of our analysis of the Yale study results.

Comment: One commenter requested information on how many DRGs are defined in the "Refined Yale GROUPER" and its possible use for FY 1991.

Response: Under the Refined Yale GROUPER (the Yale model), a patient is first assigned to an MDC based on his or her principal diagnosis code. Then, if the patient had a temporary tracheostomy (except for patients assigned to MDC 3 or MDC 15) or died within 2 days of admission (medical patients only), the case is assigned to a tracheostomy or early death group. The MDCs in the Yale model are identical to the MDCs defined GROUPER 6 (effective October 1, 1988).

A patient not classified as "temporary tracheostomy" or "early death" is assigned to one of 317 subgroups (referred to as ADRGs) based on his or her principal diagnosis (medical hospitalization) or major procedure performed (surgical hospitalization). Finally, patients in each of the medical and surgical ADRGs are divided into final groups (RDRGs) based on classes of additional diagnoses. The classes for medical cases represent subsets of additional diagnoses on the GROUPER 6 comorbidities and complications (CCs) list to indicate a major, moderate, and minor or no effect on resource use. Surgical classes represent those cases with a catastrophic, major, moderate, or minor or no effect on resource use. Patients with no additional diagnoses are assigned to the class with minor or no effect on resource use.

This assignment algorithm applies to all MDCs except MDC 3 and MDC 15. In MDC 3 (Diseases and Disorders of the Ear, Nose and Throat), only medical patients can be assigned to the initial tracheostomy group. In MDC 15 (Newborns and Other Neonates with Conditions Originating in the Perinatal Period), a model specific to neonates was developed. Excluding MDC 15, there are a total of 1,126 refined DRGs: 167 medical ADRGs with three classes; 145 surgical ADRGs with four classes; 22 early death groups; 22 temporary tracheostomy groups; and one group for discharges with ADRGs 468, 469, 470, 476, and 477.

We are continuing to evaluate the Yale recommendations and to assess the most appropriate DRG groupings as part of our ongoing research concerning potential methodologies for incorporating severity measures into the prospective payment system. We have no plans to implement the Yale model in FY 1991. However, it is possible that selected aspects of the system (for example, the method for assigning ventilator patients) could be implemented independently of the rest of the Yale model if our analysis indicates that they are the preferred models for classification.

c. *Limb Salvage Surgery.* In the September 30, 1988 final rule (53 FR 38483), we stated that we had become involved in a broad analysis of the classification of certain major cardiovascular procedures that could potentially result in the restructuring of DRG 108 (Other Cardiothoracic or Vascular Procedures With Pump), DRG 109 (Other Cardiothoracic Procedures Without Pump), DRGs 110 and 111 (Major Reconstructive Vascular Procedures Without Pump), and DRG 112 (Vascular Procedures Except Major Reconstruction Without Pump). This analysis evolved from our ongoing DRG refinement analysis.

The problem that has been observed is that the DRG system provides the same payment to hospitals for patients who require an arterial reconstruction for intermittent claudication as it does for those patients who require the same kind of operation for limb threatening ischemia (that is, for gangrene, a nonhealing ischemic ulcer, or severe ischemic rest pain).

Based on our review of these cases, we have not determined if this problem can be solved through a change in the GROUPER logic. Since the same surgical procedure is performed for each group, it is impossible to differentiate on that basis alone.

It appears from all the data we have analyzed thus far that we are dealing with different quantities that legitimately fall under virtually identical categories in the ICD–9–CM. Different surgeons are performing the same basic procedures on patients who fall at the opposite ends of the range in severity of the manifestations of peripheral vascular disease. The GROUPER program can assign only the codes listed on the billing record, and the distinguishing secondary diagnoses of gangrene and decubitus ulcers are perhaps not shown as often as they actually occur. As long as the procedures involved are found to be medically appropriate, it would be contrary to one of the basic premises of the prospective payment system to create expensive and inexpensive subcategories of cases exhibiting similar ICD–9–CM coding.

Therefore, although we will continue to examine this issue, we did not propose to make any changes to DRGs 108 through 112.

Comment: Several commenters expressed concern that continued inadequate payment for limb salvage cases could limit the availability of the procedure and create incentives to perform amputation. One commenter recommended that cases in DRG 110 (Major Reconstructive Vascular Procedure Without Pump With CC) be differentiated based on whether there is a gangrenous lesion that could lead to amputation of the limb. This change would not require modification of the procedure codes.

Response: We will continue to analyze the cases in DRG 110 with attention to the classification change suggested by the commenter.

d. *Reassignment of Patients with Guillain-Barre Syndrome.* Guillain-Barre syndrome is a postinfectious polyneuropathy in which patients may require plasmapheresis, ventilation assistance, and long intensive-care stays. Guillain-Barre syndrome discharges have been assigned to DRGs 18 and 19 (Cranial and Peripheral Nerve Disorders). ProPAC believes that the classification of Guillain-Barre syndrome cases into DRGs 18 and 19 is inappropriate in terms of resource use; that is, the average resource use associated with Guillain-Barre syndrome cases is higher than the resource use for average cases in DRGs 18 and 19. In its recommendation 13, ProPAC recommended that the Secretary reassign patients with Guillain-Barre syndrome from DRGs 18 and 19 to DRG 20 (Nervous System Infection Except Viral Meningitis) and DRG 34 (Other Disorders of Nervous System With CC); alternatively, a new DRG could be established.

As we stated in the proposed rule, we are unable to evaluate the appropriateness of a classification change for Guillain-Barre syndrome patients without further analysis of the FY 1988 MEDPAR data. Moreover, the issue of whether reclassification to DRGs 20 and 34 would be clinically consistent warrants further examination. We will examine this issue as part of our ongoing DRG refinement analyses.

Comment: ProPAC expressed concern that, given the magnitude of differences between costs for Guillain-Barre cases and other cases with cranial and peripheral nerve disorders in DRGs 18 and 19 (Cranial and Peripheral Nerve Disorders) found in its analysis of FY 1987 MEDPAR data, it was unclear why HCFA feels analysis of FY 1988 data is required before a classification change can be proposed. ProPAC believes that the prospective payment system must be

sufficiently flexible to correct payment inequities in a timely fashion.

Response: When possible payment inequities are brought to our attention, we try to analyze and respond in a timely fashion. However, ProPAC's recommendation concerning alternative classification methods for Guillain-Barre cases was not presented to us until March 1, 1989. This did not provide adequate time to investigate the issue thoroughly and to analyze the appropriateness of the alternative classifications suggested by ProPAC before publication of the proposed DRG changes and relative weights.

While we appreciate and welcome ProPAC's analyses of DRG classification issues, ProPAC's studies do not relieve us of our responsibility to analyze the data and other evidence that would support a classification change and to determine the impact the change would have on the affected DRGs.

Our review of the FY 1988 MEDPAR data since publication of the proposed rule confirms ProPAC's finding that Guillain-Barre cases are more resource intensive than other cases within the same DRG. As we indicated in the proposed rule, we will examine the issue of the appropriate DRG classification for these cases as part of our ongoing DRG refinement analyses.

e. *Electrophysiological studies.* In the September 30, 1988 final rule, we discussed our inability to determine whether electrophysiologic (EP) studies should be treated as OR procedures in order to have an effect on DRG assignment. (53 FR 38488.) We stated that the FY 1987 MEDPAR data indicated that the incidence of EP studies was too small to warrant differential payment. We encouraged hospitals to code EP studies on their billing forms so that we might conduct a more thorough analysis of this procedure.

Comment: The American College of Cardiology, a number of cardiologists and electrophysiologists, and a major health industry manufacturer objected to the continued treatment of procedure code 37.26 (Cardiac electrophysiologic stimulation and recording studies) as a non-OR procedure since this would mean that this procedure would continue to have no effect on DRG assignment.

A majority of the commenters believe that EP studies should be treated as either a cardiac catheterization or an OR procedure for the purpose of DRG assignment. Although generally performed in a catheterization laboratory or radiology suite rather than in an operating room, EP studies involve significant levels of time and resources in managing patients with potentially life-threatening cardiac arrhythmias. Multiple drug testing in cases that do not ultimately involve surgery can involve stays of over 2 weeks in length.

Response: EP studies and cardiac mapping were previously identified temporarily under procedure code 37.29 (Other diagnostic procedures on the Heart) long with HIS Bundle until October 1, 1988 when the distinct ICD–9–CM procedure code for EP studies became effective. EP studies have been used since the early 1980's to determine the appropriate antifibrillation agent to be prescribed for patients with inducible cardiac arrhythmias. In the absence of verifiable data under the temporary code, we reasoned that the cost of EP studies should have already been reflected in the relative weights of both the medical and surgical DRGs in which such cases had been classified.

In our analysis of this issue as presented in the September 30, 1988 final rule, we concluded that the number of cases available for review from the FY 1987 MEDPAR file was too small to warrant differential payment and that there are sufficient numbers of other cases to average out payments (53 FR 38489). To the extent that EP studies occurred much more frequently than our data suggested, we encouraged hospitals to record these codes on their billing forms so that we might conduct a more thorough analysis of these procedures in the future. At that time, however, we believed in was inappropriate to construct a new DRG or to test EP studies as an OR procedure.

We now have been able to analyze the bill data for a portion of FY 1989 for DRGs showing procedure code 37.26. We believe it supports the comparability of EP studies to cardiac catherization procedures in terms of resource use and time required. Based on this analysis and the concurrence of our medical staff, we are making a number of changes in the DRG assignment of procedure code 37.26 for discharge occurring on or after October 1, 1989.

We found code 37.26 in 1.0 percent of the available FY 1989 data for DRGs 138 and 139. Although this is not a great increase, we believe that it is significant that over 80 percent of the codes were shown in medical DRGs. (We would not necessarily expect to find EP studies coded on surgical bills because in the limited space available, there are procedure codes that are much more likely to be coded if performed because, unlike EP studies, these other codes may affect DRG assignment.)

Therefore, based on public comment and our analyses, in MDC 5, DRGs 104 and 106, we are adding 37.26 to the listing of nonoperating room procedures. In DRGs 108 and 112, we are adding 37.26 as a nonoperating room procedure. This HSI Definitions Manual will show this as: Or, NON-OPERATING ROOM PROCEDURE, 3726 Cardiac electrophysiologic stimulation and recording studies. (The code will be shown in the short description.)

We have determined from our discussions with a manufacturer of the automatic implantable cardioverter defibrillator (AICD) that the EP studies performed during the implantation, revision, or replacement of an AICD is considered to be a part of the procedure and thus would not be coded in addition to the AICD procedure codes (37.94–37.98). The HCFA representatives on the ICD–9–CM Coordination and Maintenance Committee and the Editorial Advisory Board of AHA's "Coding Clinic" intend to publish information to clarify the use of this code in its new classification.

f. *Automatic Implanted Cardioverter Defibrillator (AICD).*

Comment: The manufacturer of the automatic implanted cardioverter defibrillator (AICD) system currently available recommended three specific changes in the DRG assignment of the AICD procedure codes as follows:

- Cases in which a patient undergoes initial AICD system implantation and EP testing should be classified into DRG 104 (Cardiac Value Procedure With Pump and With Cardiac Catherter).
- When a total AICD system is implanted in two stages on different days in the same hospitalization (that is, the lead system is implanted on one day and the AICD device is implanted on a subsequent day), the case should be assigned to DRG 104.
- AICD replacement cases should be moved from DRG 120 (Other Circulatory System OR Procedures) and be reassigned to DRG 109 (Other Cardiothoracic Procedures Without Pump).

The commenter submitted a contractor study that concluded that the average standardized charges for AICD replacement cases are understated in the FY 1987 MEDPAR file. Based on a survey of physicians and hospitals that perform this procedure that analyzed the 167 AICD replacement cases in the FY 1987 MEDPAR file, the contractor found that—

- 31 percent of the cases were from hospitals that had never purchased an AICD device, which implies that the ICD–9–CM coding shown on the claim is not correct;
- 6 percent of the cases were not AICD replacements but nevertheless

were from hospitals that purchased and implanted AICD devices; and

• 8 percent of the cases were from hospitals that undercharged or never charged for the device.

We also received a large number of comments from physicians and organizations that made the same recommendations.

Response: We agree that when a patient undergoes complete baseline EP testing to determine the proper treatment of their cardiac arrhythmias ultimately receives a defibrillator implant in the same admission, that discharge should be assigned to DRG 104. Accordingly, as discussed above, we have added EP testing as a nonoperating room procedure to DRG 104.

In response to the suggestion concerning AICD systems that are implanted during two separate operations on different days in the same hospital stay, we had not previously classified these cases in DRGs 104 and 105 for two reasons. We did not have data for either the separate initial implant or replacement of a defibrillator device and leads in our data base. Additionally, our medical staff and consultants were not convinced that this technique of separate operations is widely practiced. Thus, the ICD–9–CM procedure codes 37.95 (Implantation of automatic cardioverter/defibrillator lead(s) only) and 37.96 (Implantation of cardioverter/defibrillator pulse generator only) are assigned to DRG 120 (Other Circulatory System OR Procedures). Code 37.95 is currently included on the Medicare Code Editor (MCE) list of noncovered OR procedures.

It is our understanding that medical records administrators would not generally substitute code 37.94 (Implantation or replacement of automatic cardioverter/defibrillator, total system [AICD]) for the two separate procedures because it would not represent the events involved in the patient's treatment. We have not previously found cases with the two initial implant codes nor have we found the two replacement codes (37.97 and 37.98) in combination in prior data bases. However, the FY 1988 MEDPAR data include one case with a two-stage initial implant and three cases with a two-stage replacement.

Even though it seems to be rare in the Medicare population, we agree that if an entire system is implanted or replaced in separate stages of the same admission, it should be assigned to DRG 104 or DRG 105. Therefore, we are removing code 37.95 from the MCE noncovered procedure edit and adding the following code pairs to the OR procedure list for DRGs 104 and 105:

37.95 and 37.96
37.97 and 37.98

With regard to the classification of replacement or insertion of AICD leads or pulse generator alone, we continue to believe that placement in DRG 120 is appropriate for these procedures. Our analysis of the FY 1988 MEDPAR data for DRG 120 indicates that the standardized charges for cases with the code for replacement of an AICD lead or pulse generator alone is more than $3,000 lower than the standardized charge for the DRG. In addition, the standardized charge for the DRG is $14,250 compared to the $15,000 minimum cost estimated in the contractor's study for an AICD replacement case in FY 1987 (based on the cost of the device and a 2-day hospital stay). Even allowing for inflation, the estimated cost for the replacement cases is well within the variation in charges for DRG 120.

The commenter's recommendation to reassign the AICD replacement cases to DRG 109 is based on comparing the average weight for DRG 109 with an imputed weight for the AICD replacement cases based on the cases in the study with the average charges in excess of $15,000 and imputed charges for those cases in which the hospital implanted the device but undercharged or or did not charge for the device. The imputed charges were based on the cost of the device plus a 14 percent markup. We do not believe it is appropriate to make DRG classification changes using imputed charges in this manner. We can only assume that what the hospital submits as its charges on each bill are in fact the actual total charges. A hospital is not under any obligation to show charges equal to or greater than its costs for services.

Finally, we share the commenter's concern that the procedure codes for AICD replacement should be properly used. Therefore, we will furnish the information provided by the commenter about potential improper coding to the PRO's for their review.

g. *Tissue Plasminogen Activator (TPA).*

Comment: A commenter expressed concern that the recalibration process does not account adequately for the costs incurred by hospitals in using tissue plasminogen activator (TPA). The commenter requested an adjustment in the weights to ensure that the use of TPA is adequately reflected and recommended further analysis of the DRG classification for patients with acute myocardial infarctions to ensure that the DRGs consist of homogenous groupings based on clinical and cost criteria.

Response: As indicated in the September 30, 1988 rule 53 FR 38491), we believe that the update factors provided for in section 1886(b)(3)(B)(i) of the Act and the annual recalibration process provide sufficient recognition of the cost of TPA. Since the recalibration process uses actul charges, hospital resources directly associated with TPA in FY 1988 were used in the calculation of the DRG weights. In this regard, the costs of the drug may be offset by shorter hospital stays.

With regard to the DRG classification of patients with acute myocardial infarctions, we note the change we are making that is effective for discharges on or after October 1, 1989 to assign the less resource-intensive patients who are not suffering an acute myocardial infarction but who are readmitted to the hospital within 8 weeks of a myocardial infarction to one of the atherosclerosis DRGs (DRG 132 or 133) should improve the clinical homogeneity of the acute myocardial infarction DRGs (DRGs 121, 122 and 123). As data reflecting this change become available, we will review the appropriateness of the DRG assignments as part of our ongoing review of the DRG classification system.

h. *MDC 8: Diseases and Disorders of the Musculoskeletal System and Connective Tissue.*

Comment: We received one comment concerning DRG 209 (Major Joint and Limb Reattachment Procedures) and DRG 471 (Bilateral or Multiple Major Joint Procedures of Lower Extremity). The commenter asserted that, in terms of weighting and classification, the prospective payment system has not kept pace with technological advancements connected with these two DRGs. The commenter stated that there are two variations in joint replacement surgery that are more costly than the average joint replacement surgery case: one that involves the use of a porous-coated prosthesis and the other is revision joint replacement surgery. The commenter recommended that we analyze our data to determine whether they support the addition of a new DRG for porous-coated joint replacement surgery and a new DRG for revision joint replacement surgery.

Response: The commenter raises a new issue concerning DRGs 209 and 471 that was not discussed in the proposed rule. With regard to the variations in joint replacement surgery described by the commenter, several coding changes have been made (see Tables 6b and 6c as set forth in the addendum to this final

rule) that will be effective for procedures performed on or after October 1, 1989. Basically, the codes no longer differentiate between procedures in which cement is used and those in which it is not. However, new codes were added and revisions to existing codes were made to better identify and separate revision joint replacement surgery cases from initial joint replacement surgery cases. We will evaluate the effect of these coding changes on DRG assignment and weights after data reflecting these changes become available.

i. *Autologous Bone Marrow Transplantation.*

Comment: One commenter addressed the methodology for classifying autologous bone marrow transplants and the payment levels of DRG 394 (Other OR Procedures of the Blood and Blood Forming Organs), DRG 400 (Lymphoma and Leukemia with Major OR Procedure), DRG 406 (Myeloproliferative Disorder or Poorly Differential Neoplasm With Major OR Procedure with CC), and DRG 407 (Myeloproliferative Disorder or Poorly Differential Neoplasm With Major OR Procedure without CC) in which most autologous bone marrow transplant cases would be assigned. The commenter submitted its study of operating costs and Medicare payments for autologous bone marrow transplants. The findings of this study suggest there is a significant classification problem with autologous bone marrow transplant cases with the existing DRGs and that this problem results in very significant losses to hospitals.

The commenter pointed out that because there is no unique DRG for bone marrow transplants, these cases are placed in the same DRGs as much less resource intensive cases, and as a result of averaging, the bone marrow transplant cases will be underpaid. The commenter stated that the difference between costs and the low Medicare payment level provides significant disincentives for hospitals to perform autologous bone marrow transplants for Medicare patients. The commenter expressed concern that hospitals that perform autologous bone marrow transplants could be forced to shift costs to other programs or payers and that access to bone marrow transplants might be reduced for Medicare patients due to inadequate payment policies.

Response: The commenter has raised an issue that was not discussed in the proposed rule. Medicare began coverage for autologous bone marrow transplants on April 28, 1989. Our methodology for classifying and determining the weight for bone marrow transplants cases is the same as the methodology for all other nonorgan transplant cases. (The Medicare manual issuances (Medicare Hospital Manual Transmittal No. 566, published in June 1989 and Medicare Intermediary Manual Transmittal No. 1426, published in May 1989) that announced our coverage of autologous bone marrow transplants contained some errors concerning payment for these bone marrow transplants. We incorrectly stated that bone marrow acquisition costs are paid on a reasonable cost basis; however, this is incorrect as this cost is included in the prospective payment amount. Also, physician services are billed under Part B at 80 percent of the reasonable charge as determined by the Medicare carrier (rather than 100 percent as stated in the manual issuances).)

Bone marrow transplants cases will be assigned to existing DRGs until data on Medicare patient experience is developed that indicate that a separate DRG would improve both clinical coherence and homogeneity with respect to resource use for a new DRG. Since coverage of the procedure was established only in April 1989, limited data will be available for analysis in the coming year. However, we will review the available data and, in doing so, we will take into account the commenter's findings.

j. *GROUPER E codes.*

Comment: One commenter recommended that the GROUPER be modified so that E codes, which are used to classify external causes of injury and poisoning, will not affect DRG assignment of cases in MDC 15 (Newborns and Other Neonates with Conditions Originating in Perinatal Period). The commenter pointed out that cases in MDC 15 with E codes are assigned to DRG 390 (Neonates with Other Significant Problems) and recommends that the GROUPER be modified to eliminate this problem even though this is not a major problem for Medicare's population since the GROUPER is used by payors other than Medicare.

Response: We agree that the GROUPER should not assign MDC 15 cases with an E code to DRG 390. We will address this problem in next year's GROUPER changes; that is, the DRG reclassification changes effective for FY 1991.

k. *Thoracoabdominal Aortic Aneruysm (TAAA) Repair.*

Comment: A commenter expressed concern that the level of resources associated with TAAA was not properly recognized by the current DRG classification system. The commenter noted that the September 30, 1988 final rule (53 FR 38483) had indicated that we would continue to review the classification of this procedure but that we had not addressed the issue in the May 8, 1989 proposed rule. The commenter suggested that the prospective payment system, which operates on the law of averages, discourages specialization even though there is no evidence that high-volume hospitals have lower complication and mortality rates.

Response: Currently, TAAA repairs are classified in DRG 108 (Other Cardiothoracic or Vascular Procedures with Pump) and DRG 109 (Other Cardiothoracic Procedures without Pump). During FY 1988, there were 69 cases in DRG 108, the same number as in FY 1987. During FY 1988, there were 293 cases in DRG 109, an increase of approximately seven percent over the number of cases in FY 1987. TAAA repairs account for approximately two percent of all cases in these DRGs. Further, analysis of the coefficient of variation for TAAA repairs shows a much higher variable in charges within the TAAA cases than within DRGs 108 and 109.

As we noted in the September 30, 1988 final rule (53 FR 38483), we are not generally persuaded that such small numbers warrant special treatment in the context of a system built on averages. While analysis indicates that cases with TAAA procedures appear to consume more resources than the average case in DRGs 108 and 109, there is no evidence that providers of these services are suffering a financial hardship as a result of performing these services.

l. *Percutaneous Transluminal Coronary Angioplasty (PTCA).* In the course of analyzing the DRG logic for DRGs 106, 107, and 108 (see discussion on surgical hierarchy for MDC 5 in section II.B.3., above), we noted a problem with the assignment of percutaneous transluminal coronary angioplasty (PTCA) (procedure codes 35.96 through 36.05). PTCA involves the insertion of a catheter in the arm or leg that is passed into the vessels that supply the heart muscle. Although PTCA is comparable clinically in resource intensity to other cardiac catheterization procedures, it is not listed as a cardiac catheterization in DRG 106 (Coronary Bypass With Cardiac Catheterization). As a result, if PTCA is performed but the patient still requires coronary bypass surgery (and does not receive another cardiac catheterization procedure), the case will be assigned to the lower-weighted DRG 107 (Coronary Bypass without Cardiac Catheterization). Even

though we did not propose a change in the PTCA assignment, we are assigning PTCA as a cardiac catheterization procedure to DRG 106 in this final rule. The title "Non-Operating Room Procedures" is being changed to "Cardiac Catheterization Procedures" in the GROUPER definitions for DRG 106. Given the comparability of PTCA with other cardiac catheterization procedures, we believe it would be inappropriate to delay implementation of this change for another year. We note that only a small number of cases will be affected by this change.

C. Recalibration of DRG Weights

One of the basic issues in recalibration is the choice of a data base that allows us to construct DRG relative weights that most accurately reflect current relative resource use. Since FY 1986, the DRG weights have been based on charge data. The latest recalibration, which was published as a part of FY 1989 prospective payment final rule, used hospital charge information from the FY 1987 MEDPAR file. For a discussion of the options we considered and the reasons we chose to use charge data beginning in FY 1986, we refer the reader to the rules published on June 10, 1985 (50 FR 24372) and September 3, 1985 (50 FR 35652).

We proposed to use the same basic methodology for the FY 1990 recalibration as we did for FY 1989. That is, we recalibrated the weights based on charge data for Medicare discharges. However, we used the most current charge information available, the FY 1988 MEDPAR file, rather than the FY 1987 MEDPAR file. The MEDPAR file is based on fully-coded diagnostic and surgical procedure data for all Medicare inpatient hospital bills.

The proposed recalibrated DRG relative weights were constructed from FY 1988 MEDPAR data received by HCFA through December 1988 from all hospitals subject to the prospective payment system and short-term acute care hospitals in waiver States. That MEDPAR file included data for approximately 9.7 million Medicare discharges (erroneously indicated as 9.5 million in the proposed rule). The MEDPAR file updated through June 1989 includes data for approximately 10 million Medicare discharges and this is the file used to calculate the weights set forth in Table 5 of the addendum to this final rule.

The methodology used to calculate the DRG weights from the FY 1988 MEDPAR file is as follows:

- All the claims were regrouped using the revised DRG classifications discussed above in section II.B. of this preamble.
- Charges were standardized to remove the effects of differences in area wage levels, indirect medical education costs, disproportionate share payments, and, for hospitals in Alaska and Hawaii, the applicable cost-of-living adjustment.
- The average standardized charge per DRG was calculated by summing the standardized charges for all cases in the DRG and dividing that amount by the number of cases classified in the DRG.
- We then eliminated statistical outliers using the same criterion as was used in computing the current weights. That is, all cases outside of 3.0 standard deviations from the mean of the log distribution of charges per case for each DRG were eliminated.
- The average charge for each DRG was then recomputed excluding the statistical outliers and divided by the national average standardized charge per case to determine the weighting factor.
- We established the weighting factor for heart transplants (DRG 103) in a manner consistent with the methodology for all other DRGs except that the heart transplant cases that were used to establish the weight were limited to those Medicare-approved heart transplant centers that have cases in the FY 1988 MEDPAR file.
- Kidney acquisition costs continue to be paid on a reasonable cost basis but, unlike other excluded costs, kidney acquisition costs are concentrated in a single DRG (DRG 302, Kidney Transplant). For this reason, it was necessary to make an adjustment to prevent the relative weight for DRG 302 from including the effect of kidney acquisition costs, since these costs are paid separately from the prospective payment rate. Kidney acquisition charges were subtracted from the total charges for each case involving a kidney transplant prior to computing the average charge for the DRG and prior to eliminating statistical outliers.
- Heart acquisition costs, like kidney acquisition costs, continue to be paid on a reasonable cost basis and are similarly concentrated in a single DRG (DRG 103, Heart Transplant). Accordingly, for the heart transplant cases in the updated MEDPAR file used for recalibration, we subtracted from the total charges of each case an estimate of heart acquisition charges prior to computing the average charge for the DRG and prior to eliminating statistical outliers, identical to the adjustment we make for removing kidney acquisition charges from cases in DRG 302. For additional information about the methodology for estimating heart acquisition costs, see the September 1, 1987 final rule at 52 FR 33037. In the proposed rule, we indicated that if adequate heart acquisition charge data were available from the bills used to determine the final DRG weights, we would use the actual heart acquisition charges in establishing the final FY 1990 weight for DRG 103. Our analysis indicates there were 110 cases in DRG 103 in the updated MEDPAR file. However, only eight of these cases had heart acquisition charges shown on the bill. Given the discrepancy between the total number of cases in the DRG and the number of cases with heart acquisition charges, we have decided to continue to estimate heart acquisition charges rather than to use the limited charge data reported on the MEDPAR file.

When we recalibrated the DRG weights for FY 1986, FY 1988, and FY 1989, we set a threshold of 10 cases as the minimum number of cases required to compute a reasonable weight. In FY 1989, there were 35 DRGs that contained fewer than 10 cases. We proposed to use that some case threshold in recalibrating the DRG weights for FY 1990. In the FY 1989 recalibration, we computed the weight for the 35 low-volume DRGs by adjusting the original weights of these DRGs by the percent change in the weight of the average case in the remaining DRGs. We proposed to use this same methodology for the FY 1990 recalibration. Using the FY 1988 MEDPAR data set, there are 27 DRGs that contain fewer than 10 cases.

ProPAC, in its March 1, 1988 report, had recommended that the DRG weights be recalibrated annually on the basis of costs rather than charges. However, ProPAC indicated concern about the Medicare cost-finding methods for estimating costs because the limitations of the Medicare cost report data may in some cases produce imprecise DRG weights. In the May 27, 1988 proposed rule, we indicated that we would examine the feasibility of adopting cost-based DRG weights (53 FR 19507).

Accordingly, we contracted with the Rand Corporation to evaluate both methodologies to determine which provided the better measure of resource consumption across DRGs. While there were noted differences in the recalibration results using each methodology (that is, charge-based weights resulted in higher weights for surgical DRGs and lower weights for medical DRGs, on average, relative to cost-based weights), Rand found no conclusive evidence favoring one methodology over the other. We continue to believe that the

disadvantages associated with charge-based weights are compensated for by the fact that, for purposes of recalibration, charge data are available on a more timely basis than cost data. For example, for the recalibrated weights for FY 1990, we are using FY 1988 Medicare billing data from the MEDPAR file. However, we have yet to obtain a full file of FY 1987 Medicare cost reports. Thus, any cost data we were to use for recalibration would be at least 1 year and perhaps as much as 2 years older than the most recent available charge data.

In addition, since costs are not accumulated on an individual case basis, DRG by DRG, it is necessary even in developing cost-based weights to link ancillary charge data from the claims file to cost report data as part of the process of estimating the average costs of cases in each DRG. In an attempt to make more timely estimates of costs, ProPAC also proposed in its March 1, 1988 report that the latest cost report data be used in conjunction with the most recent patient bills. However, as noted in the Rand study, this mismatch of data might cause distortions in estimating costs because it assumes that per diem costs rise uniformly across hospitals and that cost-to-charge ratios remain constant over time. In order to maintain consistency and to determine relative resource use accurately, we believe that charge data for the same period as the cost data should be used in cost-based recalibration. Therefore, if we were to recalibrate on the basis of costs, both the charge and cost data that would be used would be significantly older than the most recently available charge data.

We believe that using old data is inappropriate, particularly given the rapid advances in medical technology and resulting changes in treatment patterns. We further believe that it is in the best interest of the hospitals and Medicare beneficiaries that the resource use associated with these major new medical advances be reflected in the DRG weights as soon as possible. This can be accomplished by the use of charge-based weights computed on an annual recalibration schedule. We are concerned that use of cost-based weights would significantly delay recognition of new technologies or greatly complicate the recalibration process by necessitating a number of special adjustments to take such new technologies into account. Therefore, absent conclusive evidence that cost-based DRG weights provide a better measure of resource consumption across DRGs, we proposed to continue using charges as the basis for recalibrating the DRG relative weights.

The purpose of making changes in the DRG classifications and weights is to reflect changes in the relative resource costs across DRGs. Thus, the changes are intended to affect the relative distribution of payments across DRGs and should not affect aggregate payments to hospitals under the prospective payment system. Each time we have recalibrated (beginning with the first recalibration in FY 1986), we have normalized the new weights by an adjustment factor intended to ensure that recalibration by itself neither increases nor decreases projected total payments under the prospective payment system. With normalization, the average case weight after recalibration equals the average case weight prior to normalization for the same set of cases.

The case-mix index is a measurement of the average DRG weight for a given set of cases. In theory, any changes in the average case-mix index value for Medicare cases after recalibration and implementation of the new GROUPER and corresponding DRG weights should be attributable to an increase in the complexity of cases that are treated or to coding changes. However, our analysis indicates that the case-mix index value for FY 1988 cases is higher when those cases are processed with the FY 1988 GROUPER than when the same cases are processed with the FY 1986 GROUPER. This demonstrates that changes we made to the GROUPER program between FY 1986 and FY 1988 inflated the case-mix index and, therefore, program expenditures.

Several changes were introduced into the GROUPER 4 program used to pay for discharges in FY 1987. These changes, which are discussed in detail in a June 3, 1986 final notice on changes to the DRG classification system (51 FR 20192) and the September 3, 1986 final rule (51 FR 31476), included the following:

- Creation of a new DRG for extensive burns with a burn-related operating procedure.
- Elimination of age considerations from the criteria for classification of two pairs of DRGs in MDC 8 (Diseases and Disorders of the Musculoskeletal System and Connective Tissue).

Changes that were made in the GROUPER 5 program used to pay for discharges in FY 1988 are discussed in detail in a September 1, 1987 final notice on changes to the DRG classification system (52 FR 33143). The most significant of these changes were—

- Creation within MDC 4 (Diseases and Disorders of the Respiratory System) of two new DRGs for tracheostomy and mechanical ventilator cases;
- Reconfiguration of the alcohol and drug DRGs;
- Elimination of age over 69 as a criterion for classification in all of the pairs of DRGs in which age over 69 and/or CC was a factor; and
- Changes to the CC list.

We analyzed the changes in the case-mix index between FY 1986 and FY 1988 because the FY 1986 cases were used to recalibrate the DRG weights in the GROUPER 5 program, which, in turn, was used to pay the FY 1988 cases that are being used to recalibrate the FY 1990 weights that will be used with GROUPER 7. To the extent that the DRG classification changes and relative weights contributed to the increase in the case-mix index, an adjustment should be made to the FY 1990 weights in order not to build the inflated FY 1988 case weights permanently into the average case weight values.

Our analysis indicated that there was a total increase in the case-mix index of 6.4 percent between FY 1986 and FY 1988, as follows:

CASE-MIX INDEX CHANGE—FYs 1986–1988

Fiscal year	Number of discharges	GROUPER version	Case-Mix index [1]	Percent increase over FY 1986
1986	8,842,953	3	1.2045	
1987	9,501,374	4	1.2367	2.7
1988	9,142,064	5	1.2824	6.4

[1] Index values reflect GROUPER version and MEDPAR data set appropriate to each year.

We analyzed the case-mix change in order to determine what portion of the increase was attributable to changes made in the GROUPER program from FY 1986 to FY 1988.

To evaluate this question, in the proposed rule, we used each of the three GROUPER programs to process and classify the bills from the FY 1988 MEDPAR. In order to process the FY 1988 cases through the earlier GROUPER versions, FY 1988 diagnostic and surgical codes were remapped into their FY 1987 equivalents prior to being processed with GROUPER 4. These codes were then remapped into their FY 1986 equivalents prior to being processed with GROUPER 3. Since the same FY 1988 cases were processed through each of the GROUPER versions, we assumed that any differences in the average case-mix index values between the three GROUPER versions are attributable to recalibration and the changes in the GROUPER program.

We found that the FY 1988 case-mix index value was 1.35 percent greater when the cases were processed using GROUPER 5 than when using GROUPER 3, as shown below:

EFFECT OF GROUPER VERSION ON FY 1988 CASE-MIX INDEX

	FY 1988 discharges	Case-Mix Index [1]	Percent difference from GROUPER 3
GROUPER 3	9,142,064	1.2653	
GROUPER 4	9,142,064	1.2696	.34
GROUPER 5	9,142,061	1.2824	1.35

[1] Represents FY 1988 MEDPAR run through each GROUPER version.

Based on this analysis, we concluded that, of the total increase in the case-mix index value from FY 1986 to FY 1988 (that is, 6.4 percent), 1.35 percent was the result of recalibration and changes made to the GROUPER program.

In normalization, we compare the average case weight before recalibration (for FY 1990, this is determined by mapping the FY 1988 claims into their FY 1989 equivalents and processing them through GROUPER 6) to the average case weight after reclassification and recalibration. Based on the above analysis, we proposed to reduce the average case weight by 1.35 percent. Without this adjustment, we would build into the FY 1990 weights an inflated average case-weight value. We did not propose to recover the excess payments that have already been made based on the inflated weights; however, it would be inappropriate to continue to pay based on these weights. Therefore, we proposed to normalize the FY 1990 weights by an adjustment factor so that the average GROUPER 7 case weight after recalibration is equal to the average GROUPER 6 case weight prior to recalibration reduced by 1.35 percent.

We received many comments from the public on the adjustment to the DRG weights, as well as many comments on DRG recalibration in general. The specific comments and our responses follow.

Comment: Many commenters supported our policy of using charge data to recalibrate the DRG weighting factors. However, several commenters stated that we should use cost data in lieu of charges when recalibrating the DRG weights.

Response: We addressed the issue of recalibration based on cost data versus charge data in detail in the May 27, 1988 proposed rule (53 FR 19507) and the September 30, 1988 final rule (53 FR 38492). We continue to believe that while, in principle, recalibration based on cost data is preferable for calculating DRG weights, in fact, there is no choice but to rely heavily on charges. The reason is that ancillary "costs" are just ancillary charges adjusted by cost-to-charge ratios. Since both "cost" and "charge" weights are very dependent on the charge data, the co-called "cost" weights are subject to many of the same limitations as the "charge" weights. Charge data, unadjusted by cost report data on cost-to-charge ratios, only lag a year behind the current fiscal year; however, cost data lag at least 1 year and up to 2 years behind the latest available charge data. Although we are attempting to accelerate the process for submitting and reviewing cost report data, there is an inherent limitation in this process in that cost reports cannot be submitted until after the end of a cost reporting period. We continue to be concerned that using older cost data would delay the recognition of new technologies and changes in medical practice patterns.

Finally, we are sensitive to the criticism expressed by some that cost-based weights are more compressed than charge-based weights, so that the use of charges tends to favor more costly, high technology services, which are more often furnished in urban hospitals. Nevertheless, we believe that the advantages of timely charge data outweigh the disadvantages discussed above that are inherent in the use of cost data.

Comment: One commenter opposed the lower relative weight for DRGs 336 and 337 (Transurethral prostatectomy) as set forth in the proposed rule. In addition to the commenter's opposition to the overall 1.35 percent reduction (included in a separate comment and response, below), the commenter believes that any reduction in the weight of these DRGs would only increase the amount of the underpayment to hospitals for these two DRGs. The commenter provided copies of an audit of 11 Medicare and seven non-Medicare transurethral prostatectomy cases discharged within a 3-month period during FY 1989. The commenter compares the hospital's charges to the wage-adjusted DRG payment that the hospital received with no adjustment for teaching costs or the additional cost of treating a disproportionate share of low-income patients.

Response: The commenter has expressed a basic misconception that a hospital's charges for services are comparable to the amount of Medicare prospective payment system payments to the hospital. The Medicare program has never paid on the basis of charges for inpatient services (except that, under the reasonable cost payment system, allowable costs could not exceed the hospital's charges). Moreover, the prospective payment system payment does not include capital and other pass-through costs. Therefore, an accurate comparison cannot be made between a hospital's charges for a case and the Medicare payment in order to determine the amount that payment exceeded or fell short of the cost of treating that

case. For example, we adjusted the average of the charge amounts presented by the commenter by the appropriate Statewide urban cost-to-charge ratio as set forth in Table 8 of the addendum to the September 30, 1988 final rule (53 FR 38628). The adjusted average amounts were very close to the applicable DRG payment amounts cited by the commenter.

With respect to the commenter's concern regarding adequate payment for transurethral prostatectomy cases under the prospective payment system, we must reiterate that the prospective payment system is not designed so that the payment received covers the full cost of every discharge. A hospital's payment may be greater than its costs for some DRGs and less than its costs for other DRGs. While the Medicare prospective payment amount may not cover the complete cost of care for some cases that develop complications or involve more severe illnesses or multiple procedures, there are likely to be many cases in which the Medicare payment exceeds the cost of treating the patient, and the excess payments received in these cases should offset these higher cost cases. Thus, the prospective payment system is intended to provide an incentive for hospitals to manage their operations more efficiently by evaluating those areas where increased efficiencies can be instituted without adversely affecting the quality of care and by treating a mix of cases so that payment in excess of cost on one DRG will offset costs in excess of payment of another DRG.

Comment: We received a large number of comments questioning our authority to impose an across-the board reduction in the DRG weights in order to correct for increases in the case-mix index resulting from changes in the DRG classification system and recalibration. Many commenters stated that the update factor is the traditional vehicle for incorporating coding effects into the prospective payment system and suggested that HCFA was, in effect, making an adjustment for case-mix increase twice; once in the weights and again in the update recommendation. The commenters also noted that since Congress has eliminated HCFA's discretion in setting the update factor, the decision to reduce the DRG weights by 1.35 percent is HCFA's attempt to circumvent congressional intent.

Response: We believe that the reduction in the DRG weights is necessary in order to maintain budget neutrality, and that we have the authority to make appropriate adjustments to the DRG weights to ensure that any changes in the DRG classifications and weights do not affect aggregate payments to hospitals under the prospective payment system. Section 1886(d)(4)(A) of the Act requires the Secretary to establish a classification system for measuring relative resource consumption using diagnosis-related groups and a methodology for classifying specific inpatient hospital discharges within these groups. Section 1886(d)(4)(C) of the Act requires that these classification and weighting factors be adjusted annually beginning in FY 1988 "to reflect changes in treatment patterns, technology, and other factors which may change the relative use of hospital resources."

Since changes in the DRG classifications and weighting factors are intended to account for "relative" changes in resource consumption across DRGs, we believe it is implicit that any reclassification or recalibration, or both, of the DRGs should not influence aggregate payments to hospitals. Changes in the DRG classification system and the DRG weights are intended only to redistribute prospective payments among cases and should not increase or decrease total payments. Without the reduction in the DRG weights, we would build the inflated DRG weights resulting from changes in the classification system and recalibration into the FY 1990 prospective payment system payments.

With regard to those commenters who stated that the update factor is the vehicle that should be used to account for the effect of changes in the case-mix index on aggregate payment levels, we disagree with respect to the effects of reclassification and recalibration changes. When the increase in the case-mix index is directly related to reclassification and recalibration of the DRG system, we believe it is more appropriate for the adjustment to be made in the DRG weights as an integral part of the recalibration process. We note that our update recommendation does not include this increase as a factor of consideration.

Comment: A few commenters expressed concern that a reduction in all DRG weights would have a greater effect on hospitals with a low case-mix index value than those with higher values. At least one commenter believes that .0135 would be subtracted from each DRG weight.

Response: We are implementing an across-the-board percentage reduction in the DRG weights. The impact of this reduction will fall equally on all hospitals as a percentage reduction in their average case weight and will not be proportionately greater for hospitals with low case-mix index values.

Comment: Several commenters argued that the 1.35 percent reduction is inappropriate because GROUPER changes are made to better account for actual resource use on very costly cases and that an increase in the average case-mix index value across GROUPER versions should be an expected result. Other commenters expressed concern that the methodology used to arrive at the 1.35 percent reduction appears to discount changes in case mix, either real or related to coding, that could not be identified and measured with GROUPER 3. Once commenter suggested that some of the case-mix increase may reflect the ability of the GROUPER improvements to capture some of the increase within DRG complexity. This commenter argues that this increase represents a real increase in patient resource requirements that justifies an increase in hospital payments.

Response: The purpose of the GROUPER changes is to improve the way past cases are classified to measure relative resource consummption in establishing the DRG weights and the way current cases are classified for payment purposes. In the year in which the change are made, they are intended to be budget neutral; that is, the payments in that year should be no more or no less than the payments would have been without the changes. We proposed the 1.35 percent reduction in DRG weights because our analysis indicated that of the total increase in the case-mix index value between FY 1986 and FY 1988 (that is, 6.4 percent), 1.35 percent (about one-fifth of the total increase) resulted from the GROUPER changes and recalibration in those years. No adjustment in the DRG weights was proposed for the remaining increase in total case-mix.

To the extent the classification changes capture differences in relative resource consumption that were not previously measured (such as increases in DRG complexity) and as the frequency of the more resource-intensive cases increases relative to the frequency of the less resource-intensive cases in subsequent years, we agree that there is a change in case mix. The portion of the change in the case mix that is real (that is, that does not result from coding improvements) represents an increase in resource requirements that should be recognized by increased payments in the subsequent years. However, the actual resource requirements for a set of cases does not change merely because the cases are processed through different GROUPER

versions. Consequently, for the year in which the GROUPER refinements are initially effective, the average case weight should be the same when the cases are processed through the old and the new GROUPER versions.

In the proposed rule, we based the 1.35 percent reduction in the DRG weights on a comparison of the average FY 1988 case-mix index value with the average case-mix index value for the FY 1988 cases processed through GROUPER 3. We used only FY 1988 cases paid under the prospective payment system. Upon further analysis, we have decided to make two changes in our methodology. First, we have used data from all hospitals subject to the prospective payment system and short-term acute care hospitals in the waiver States in order to be consistent with the data set used to recalibrate and normalize the DRG weights. Second, we have concluded that the method we used in the proposed rule does not give appropriate recognition to changes in the distribution and resource intensity of FY 1987 cases in determining the overall adjustment for case-mix increases occurring between FY 1986 and FY 1988. To take these changes into account, we have determined the case-mix adjustment in this final rule by using two steps. First, we processed FY 1987 MEDPAR data (cases that were paid using GROUPER 4) through GROUPER 3 and computed a case-mix index value. The difference between the actual FY 1987 case-mix index value and the case-mix index value for the FY 1987 cases using GROUPER 3 represents the change in case mix attributable to the GROUPER 4 classification changes. We determined there was a .29 percent increase in the case-mix index between GROUPER 3 and GROUPER 4 using the FY 1987 cases. Next, we processed FY 1988 data through GROUPER 4 and computed an average case-mix index value. The FY 1988 case-mix index value was .93 percent higher than the case-mix index value for the FY 1988 cases processed through GROUPER 4. The combined increase was 1.22 percent. Based on this analysis, in this final rule, we have reduced the FY 1990 weights to remove the 1.22 percent increase in the average case weight attributable to GROUPER changes and recalibration between FY 1986 and FY 1988. We make this reduction by multiplying the FY 1990 weights after normalization by .9879 (1 divided by 1.0122). The results of our analysis are shown below:

EFFECT OF GROUPER VERSION ON FY 1988 CASE-MIX INDEX VALUE

	Number of FY discharges	GROUPER 3 case-mix index	GROUPER 4 case-mix index	GROUPER 5 case-mix index	Percent difference between GROUPER versions
1987	9,753,095	1.2354	1.2390		.29
1988	9,983,903		1.2691	1.2809	.93
					1.22

If we had made no change in methodology between the proposed rule and the final rule, but merely used updated FY 1988 data, the reduction would have remained at 1.35 percent.

Comment: Several commenters noted that the GROUPER changes result in a better classification system and suggested that the case-mix index value and payments that results from GROUPERS 3 and 4 were inappropriately low because these enhancements were not reflected in those GROUPERS. These commenters suggested that it is inappropriate to assume that the GROUPER 5 weights are inflated; instead, it is just as likely that the GROUPER 3 weights were deflated.

Response: The relative weights distribute payments across DRGs and should not influence aggregate payment levels. Although the new GROUPER contains improvements in the classification system and updated weights, these changes do not affect the actual resource requirements of the cases to be processed with the GROUPER and the average case weight should remain the same. If there is a change, it means that implementation of the new GROUPER was not budget neutral. Thus, the issue is not whether the GROUPER 5 weights were inflated or the GROUPER 3 weights were deflated relative to an appropriate payment level. Rather, the issue is whether the GROUPER 5 average case weight is inflated relative to what the average case weight would be if the GROUPER revisions were implemented in a budget neutral manner.

Comment: One commenter expressed concern that HCFA attributes increases in the average case-mix index value to coding changes and suggested that no major changes have occurred in coding practices in the last three years. Therefore, it is inappropriate for HCFA to attribute increases in the case mix index value to coding changes without conducting actual reviews of coding to substantiate this claim. Another commenter noted that the upward shift in the measured case-mix index value between the two GROUPERS fails to isolate the effect of coding changes and could as readily be observed even if no DRG classifications were changed as long as the relative costliness of DRGs in the two GROUPERS is not identical. One commenter submitted an analysis concluding that changes in the average case-mix index value could be the result of three factors: real change in patient mix and improvements in the DRG system; changes in coding result in apparent or nominal changes in case mix; and changes in the relative cost structure of the DRGs. The commenter indicated that real changes in case mix cannot be distinguished from changes in case mix that are the result of coding practices and concluded that, since HCFA cannot demonstrate that the increase in case mix is not real, the reduction in the DRG weights should not be made.

Response: In the proposed rule, we indicated that we were making the reduction in the DRG weights because our analysis indicated that changes made to the GROUPER program and recalibration, coupled with changes in hospital reporting practices made in response to those changes, inflated the case-mix index value and, therefore, program expenditures. Unfortunately, our mention of changes in hospital coding practices has confused the underlying problem the reduction in DRG weights is to address; that is, for whatever reason, the changes in GROUPER versions and relative weights between FYs 1986 and 1988 artificially inflated the FY 1988 case-mix index value and a reduction is needed in the DRG weights in order not to build the

inflated values into future prospective payment amounts.

As several commenters noted, the reason the case-mix index value for the FY 1988 cases is higher than it would have been if the GROUPER changes had not been made is because there was a change in the distribution of cases across DRGs between the cases used to determine the GROUPER 4 and GROUPER 5 relative weights and the FY 1988 cases. Relatively more cases fell into higher-weighted DRGs in FYs 1987 and 1988 than had been projected when the GROUPER 4 and GROUPER 5 relative weights were established. To some extent, the change in distribution represents a real change in resource requirements between, for example, the FY 1986 cases used in the GROUPER 5 recalibration and the FY 1988 cases paid using GROUPER 5.

The remainder of the change in distribution represents only a nominal change in the resource requirements between the two sets of cases. For example, one of the GROUPER 5 changes was to eliminate age 70 or over as a factor that would automatically classify a case into the "with CC" (complications or comorbidities) DRG of a paired DRG. We projected the impact of this change in establishing the GROUPER 5 relative weights based on the CCs coded on the FY 1986 bills. A case previously assigned to the "with CC" DRG on the basis of age was reclassified to the "without CC" DRG if no CCs were shown on the bill. In FY 1988, a higher percentage of cases in the paired DRGs had CCs shown on their bills than had been projected on the basis of the FY 1986 bills. In part, more CCs were shown because there was a real change in the percentage of patients with CCs; however, more CCs were also shown because coding of CCs had not been required under the prior GROUPER versions in order for a patient age 70 or older to be classified in the "with CC" DRG. The latter cases represent only a nominal change in resource requirements since the CCs existed but had not been coded in FY 1986. It was this type of change that prompted the reference in the proposed rule to changes in reporting practices contributing to the inflated case-mix index value.

For purposes of establishing the FY 1990 DRG weights, we do not believe it is necessary to determine how much of the change in distribution of cases was real and how much was nominal. This determination is not relevant to the basic issue of whether implementation of the new GROUPER versions and relative weights was budget neutral. There is no change in the actual resource requirements of the FY 1988 cases when they are processed through GROUPER 4 or when the FY 1987 cases are processed through GROUPER 3. Any measured differences in the case-mix index must be attributable to the GROUPER changes and recalibrations made in those years.

Comment: One commenter maintained that with the refinements in the new GROUPER, we should expect some changes in distribution of cases and that the appropriate test for budget neutrality is the changes in the data base on which the GROUPER is developed rather than a comparison based on two different GROUPERs. Other commenters argued that our proposal to reduce the DRG weights represents a break with our historical policy of making DRG reclassification and recalibration budget neutral. Some commenters contended that the reduction is solely a budget strategy and not a methodological improvement.

Response: When we make the DRG classification changes and recalibrate the DRG weights to reflect changes in the relative resource intensity across DRGs, we normalize the new DRG weights by an adjustment factor intended to ensure that implementation of the new GROUPER version and DRG weights will be budget neutral. With normalization, the average case weight after making the GROUPER changes and recalibrating the weights equals the average case weight for the same set of cases before making any changes. We use the most recent data available to estimate the average case weight used in normalization. Nevertheless, there is a 2-year lag between the data used to establish the new DRG weights and the year the new weights are effective. For example, we used FY 1986 data to establish the FY 1988 DRG weights. Since normalization is based on the distribution of cases from 2 years earlier, the resulting factor is an estimate of the adjustment needed to ensure that the GROUPER changes and recalibration achieve budget neutrality. There is no assurance that actual expenditures will not be affected by the changes. The appropriate test for determining whether budget neutrality is actually achieved is to compare the average case weight for the actual cases processed during the year the new DRG weights were effective with the average case weight for the same set of cases using the GROUPER and DRG weights in effect in the prior year. This comparison determines what the normalization factor would have been had the actual data needed to ensure budget neutrality had been available at the time the new DRG weights were established. We believe that this refinement is needed to assure, at the very least, that any changes in the case-mix index resulting from GROUPER versions are not built into future prospective payment amounts. Therefore, the reduction is entirely consistent with our policy of making GROUPER changes and recalibration budget neutral.

Comment: One commenter argued that since HCFA is required by law to recalibrate annually, the argument that FY 1988 payments would have been lower if the GROUPER in effect in FY 1986 had still been in place for FY 1988 is irrelevant. The commenter further notes that HCFA could not have continued to use the FY 1986 reclassifications without rescinding the FY 1987 reclassifications and concluded that, at the very least, HCFA should not have compared the case-mix index value for FY 1988 cases using the FY 1986 GROUPER, but rather with the case-mix index value obtained with the FY 1987 GROUPER.

Response: We do not believe the commenter's assertion is correct. We recognize that we are required to make appropriate DRG classification changes and recalibrate annually and have not suggested otherwise. However, the GROUPER changes and changes due to recalibration should be budget neutral. The test for whether the effect of the GROUPER revisions is budget neutral is whether the case-mix index value for FY 1988 cases is the same as it would have been in the absence of those revisions.

The reduction in DRG weights is based on the changes in the case-mix index value between FYs 1986 and 1988. We chose this time period because the FY 1986 cases were used to recalibrate the DRG weights in the GROUPER 5 program, which, in turn, was used to pay the FY 1988 cases that are being used to establish the FY 1990 DRG weights. In the proposed rule, we compared the actual case-mix index value for the FY 1988 cases with the case-mix index value for these cases processed with the FY 1986 GROUPER. The 1.22 percent reduction in the final rule is based on the combined differences in the average case-mix index values between the actual FY 1988 case-mix index value and the case-mix index value for the FY 1988 cases processed with the FY 1987 GROUPER and between the actual FY 1987 case-mix index value and the case-mix index value for the FY 1987 cases processed with the FY 1986 GROUPER.

Comment: One commenter asked why the FY 1988 claims were not processed

through GROUPER 6 and GROUPER 7 and noted that there were changes made to these GROUPERs that may also have affected the case mix. Since GROUPER 7 will be used to pay the FY 1990 claims, the commenter suggested that normalization should be based on GROUPER 7 rather than the GROUPER that was used to pay the claims in FY 1988.

Response: The commenter appears to be confusing the normalization process with the methodology for arriving at the proposed 1.35 percent reduction (1.22 percent in this final rule). In normalizing the FY 1990 weights, we processed the FY 1988 claims through GROUPER 6 and GROUPER 7. The GROUPER 7 weights after recalibration are adjusted so that the average GROUPER 7 case weight equals the average case weight for the FY 1988 cases processed through GROUPER 6. This average case weight is then reduced to remove the inflated amounts attributable to GROUPER changes and recalibration between FY 1986 and FY 1988.

Comment: One commenter noted a difference between the number of cases used for the case-mix index comparison (9,142,064) and the 9.7 million cases shown in Table 7. The commenter suggested that each of the references to the 1988 MEDPAR data should have been identified with the date of the update and an indication of which data had been excluded.

Response: In the proposed rule, we used FY 1988 MEDPAR data received through December 1988. In establishing the proposed relative weights, we used discharge data from all hospitals subject to the prospective payment system and short-term acute care hospitals in the waiver States. In the case-mix comparison, we included only those hospitals that were subject to the prospective payment system.

To establish the final DRG relative weights set forth in this document, we are using FY 1988 MEDPAR data received through June 1989. The number of cases used for this purpose total 9,983,359, including 81,534 statistical outlier cases and 159 cases in low-volume DRGs that were eliminated for purposes of recalibration. The statistical outlier cases are included in normalization and both statistical outlier cases and low-volume DRG cases are included in Table 7.

The 1.22 percent reduction to the DRG weights is based on analysis of both FY 1987 MEDPAR data received through June 1988 and the FY 1988 MEDPAR data received through June 1989. In this final rule, we have included data from all hospitals subject to the prospective payment system and short-term acute care hospitals in the waiver States in order to be consistent with the data set used to recalibrate and normalize the DRG weights. There were 9,753,095 cases in FY 1987 and 9,983,903 in FY 1988 data. Slightly more FY 1988 cases (544) were used in this analysis than in recalibration because some claims could not be associated with the hospital-specific data required to standardize the charges on the bill. If we had limited the data set to prospective payment system hospitals only, as we did in the proposed rule, the resulting reduction factor would have been 1.24 percent.

Comment: One commenter questioned whether the validity of our assumption that application of the case-mix index to different GROUPERs using the same data should result in the same average case weight. The commenter suggested several factors that could account for the difference in the case-mix index value among GROUPERs using the same data:

- A difference in the crosswalk codes used to map and to remap the data.
- Errors in remapping the diagnosis and procedure codes.
- Differences in the CCs that would be recognized in the GROUPER versions.
- A different distribution of cases grouping to each DRG across years.

Response: If a new GROUPER version is implemented in a budget-neutral manner, by definition, the average case weight for the cases processed using the new DRG version and weights should be the same as the average case weight for the same cases processed with the earlier GROUPER version and weights.

We believe that the first three factors the commenter has suggested would have an immaterial effect on the average case weight difference between GROUPER versions. For example, a difference in the crosswalk codes to map the FY 1986 codes into their FY 1988 equivalents for purposes of establishing the GROUPER 5 weights and the crosswalk codes to remap the FY 1988 codes into their FY 1987 equivalents for purposes of the analysis is not relevant. The issue was not whether the same crosswalks were used to map and to remap the data but rather whether the remapping was appropriately done. The remapping was based on "A Conversion Table of New ICD–9–CM Codes" by Robert Seaman, published in "Coding Clinic", Second Quarter 1988. This information and an explanation on how 12 surgical codes that remap into more than 1 code were handled in the analysis were provided during the comment period to individuals who requested information on this aspect of our analysis. We received no public comments claiming that our remapping was incorrect.

The commenter correctly pointed out a problem with the CC Exclusions List (one of the GROUPER 5 changes), under which certain diagnoses included in the standard list of complications and comorbidities are not considered a valid CC in combination with a particular principal diagnosis. As a result, a FY 1988 bill in one of the affected DRGs would not necessarily contain any GROUPER 4 CCs that are not also CCs in GROUPER 5. When this bill is crosswalked back to GROUPER 4, it may not contain any GROUPER 4 CCs and would group to the lower-weighted DRG for the principal diagnosis "without CC." Although this situation could occur, we believe it would happen fairly infrequently and, for several reasons, should not have a significant effect on the results of our analysis. First, this issue relates only to the portion of the analysis concerning the remapping of FY 1988 cases from GROUPER 5 to GROUPER 4 since the CC would still be coded on the FY 1987 cases. Second, the potential situation would be limited to cases falling into one of the 115 DRG pairs. Third, most cases classified "with CC" in GROUPER 4 were because the patient was age 70 or over. This information would still appear on the FY 1988 bill and would still result in the patient being remapped into the "with CC" DRG. Finally, our analysis indicates that the percentage of CC cases within the paired DRGS using FY 1988 cases processed through GROUPER 4 (85.7 percent) is slightly higher than the percentage of CC cases within the paired DRGs using FY 1987 cases processed through GROUPER 4. Thus, it would appear that only an insignificant number of cases might have been dropped as CCs in the remapping.

The change in the relative distribution of cases between GROUPER 3 and GROUPER 5 partially explains the 6.4 percent increase in the case-mix index. However, the reduction in the weights that we proposed is not intended to account for the changes in the relative distribution of cases because it uses the same set of cases, FY 1988, in both GROUPERs.

Comment: Several commenters noted that the reduction in the DRG weights will have a differential impact on those hospitals that have not had any increase in case mix attributable to the GROUPER changes and recalibration. One commenter noted that the causes for the increase are not spread equally across all DRGs or across all hospitals. Another commenter suggested that it

would be more appropriate to make the reduction on a hospital-specific basis based on each hospital's actual experience.

Response: We recognize that the DRG changes and recalibration in GROUPER 4 and GROUPER 5 affected the case-mix index value for some hospitals more than for others. However, the DRG weights reflect the national experience with regard to the relative resource requirements of Medicare cases. Any changes in the DRG weights are based on national average data and must apply across all classes of hospitals. To do otherwise would require establishing separate sets of weights by classes of hospitals. We believe this is neither feasible nor desirable.

Comment: One commenter expressed concern that tables equivalent to Tables 7A and 7B (length of stay tables for GROUPERs 6 and 7) were not published in the proposed rule for GROUPER 3, GROUPER 4, and GROUPER 5. The commenter suggested that these tables were needed to verify the results of HCFA's analysis. The commenter recommended that any reduction in weights be delayed until HCFA publishes these tables and the actual codes and computer procedures used to remap the codes for GROUPER 5 to GROUPER 4 and for GROUPER 4 to GROUPER 3 as well as the original codes used to map from GROUPER 3 to GROUPER 4 and from GROUPER 4 to GROUPER 5. Another commenter stated that the proposed reduction in the DRG weights represented a major departure from previous policy and the commenter indicated that more detailed information should be made available for public review and comment. One commenter believes that documentation that is adequate to evaluate the calculation of the reduction was not made available and suggested that the entire data set be submitted for a qualified, independent audit and statistical analysis.

Response: We do not publish all the material used in preparation of our proposals because of the voluminous amounts of information that would have to be published and because these data would be of limited interest to most readers. However, we agree that relevant data and information should be made available to the public. For this reason, in the proposed rule, we set up a process for expediting data requests (54 FR 19657; May 8, 1989). Thus, information relating to our study was made available during the public comment period. This information continues to be available on request.

With respect to submitting study data for an independent audit and analysis, we do not believe such an action is necessary because we receive independent analysis through the public comment process.

III. Changes to the Hospital Wage Index

A. Background

Section 1886(d)(2)(C)(ii) of the Act required, as a part of the process of developing separate urban and rural standardized amounts for FY 1984, that we standardize the average cost per case of each hospital for differences in area wage levels. Section 1886(d)(2)(H) of the Act required that the standardized urban and rural amounts be adjusted for area variations in hospital wage levels as part of the methodology for determining prospective payments to hospitals for FY 1984. To fulfill both requirements, we constructed an index that reflects average hospital wages in each urban or rural area as a percentage of the national average hospital wage.

For purposes of determining the prospective payments to hospitals in FY 1984 and 1985, we constructed the wage index using calendar year 1981 hospital wage and employment data obtained from the Bureau of Labor Statistics (BLS) ES 202 Employment, Wages and Contributions file for hospital workers. Beginning with discharges occurring on or after May 1, 1986, we have been using a hospital wage index based on HCFA surveys of hospital wage and salary data as well as data on paid hours in hospitals. The methodology used to compute the first HCFA wage index was set forth in detail in the September 3, 1985 final rule (50 FR 35661).

For discharges occurring on or after May 1, 1986 and before September 30, 1987, the wage index was based on wage data from calendar year 1982. For discharges occurring on or after October 1, 1987 and before September 30, 1988, the wage index was based on an equal blend of calendar year 1982 and 1984 wage data.

In the September 30, 1988 final rule, we continued to use the blended wage index based on 1982 and 1984 data for determining prospective payments to hospitals in FY 1989. However, we did make some changes to the index because of the enactment of section 4005(a) of the Omnibus Reconciliation Act of 1987 (Pub. L. 100-203), which added a new section 1886(d)(8)(B) to the Act, as discussed below in section III.C. of this preamble.

B. Updating the Wage Index Data

For discharges occurring in FY 1990, we proposed to base the wage index solely on 1984 wage data. Previously, we had proposed to base the wage index for FY 1989 solely on 1984 wage data (in the May 27, 1988 proposed rule (53 FR 19508)). However, as a result of a number of revisions to the 1984 wage data that were made between the May 27, 1988 proposed rule and the September 30, 1988 final rule, the national average hourly wage increased slightly, thereby reducing the wage index values for areas not affected by the changes. Therefore, given our concern about the negative impact on aggregate payments to hospitals, we decided to postpone adoption of a wage index based solely on the 1984 wage data. Our current analysis indicates that moving from a blended wage index to one based solely on 1984 data does not have a significant impact on aggregate prospective payments.

As discussed below in section III.D. of this preamble, we indicated that we are conducting a survey to collect wage data for the FY 1991 update to the wage index.

Comment: Several commenters indicated that, even though it would result in using older data, we should continue to use the blended wage index based on 1982 and 1984 wage data until the wage index based on data from the new wage survey Form 2561 is available for use. Many of these commenters believed that the 1984 wage data contain numerous errors as evidenced by HCFA's continuous actions to make corrections to those data. However, there were several commenters who believed that using the 1984 wage survey data represents an improvement over the current blended wage index.

Response: While it is true that we continue to accept corrections to the 1984 wage survey data, we believe that the 1984 wage data are generally accurate. The 1984 wage survey was completed by 99.5 percent of all hospitals subject to the prospective payment system, while only 92.5 percent of hospitals responded to the 1982 survey. We have resolved each correction that has come to our attention and we have revised the wage index prospectively.

In addition, over 67 percent of the 1984 wage surveys were audited, while the final 1982 data came from the hospital directly and were not audited. We believe that the fact that corrections have been made to the 1984 data should not be construed as an indication that the 1984 data are less valid; we have made corrections to the 1982 wage data as well. We believe that the 1984 wage data represent the latest and most complete and accurate data currently available for constructing the hospital wage index. Given the criticisms we

have received concerning the use of old data, we do not believe it is appropriate to continue to use 1982 wage data in constructing the wage index.

We note that recent corrections have resulted in relatively small changes to the wage index values for most affected Metropolitan Statistical Areas (MSAs) and rural areas. As a matter of fact, several corrections resulted in no change or a change to only the third or fourth decimal place of the wage index value for the affected area.

Comment: Several commenters suggested that the wage index based solely on 1984 data should be adjusted so that implementation of the wage index does not result in any reduction to total aggregate prospective payments (that is, changes to the wage index should be budget neutral). One of these commenters believes that any change made to the prospective payment system should be budget neutral except for provisions that Congress has specifically indicated should result in an increase or decrease in payments. Another commenter cited language in the Conference Committee Report that accompanied Pub. L. 100–203, which states, "The conferees intend that the Secretary implement any update of the wage index in a budget neutral manner." (H.R. Rep. No. 495, 100th Cong., 1st Sess. 526 (1988).)

Response: While it is true that implementation of the new wage index does have the effect of reducing Medicare payments by an estimated 0.1 percent, we are not making a budget neutrality adjustment to the revised wage index for several reasons. First, we consider 0.1 percent to be insignificant in terms of total program payments made to hospitals under the system. In addition, the 0.1 percent reduction results not only from the implementation of a wage index based solely on 1984 data but also from the wage data corrections. If the original wage data had been reported accurately, implementation of the new wage index would have less impact on program outlays.

Finally, since the implementation of the prospective payment system, we have made other changes to the hospital wage index without making a budget neutrality adjustment. Historically, these changes have both decreased and increased the total Medicare prospective payment to hospitals. For example, when we implemented the wage index for FY 1988 (that is, the 1982/1984 blended wage index), we estimated that the total Medicare prospective payments would increase by 0.1 percent, but we made no budget neutrality adjustment.

The conference committee language cited by one commenter accompanied changes made by Congress in section 4004 of Pub. L. 100–203. Section 4004(a) of Pub. L. 100–203 amended section 1886(d)(3)(E) of the Act to require the Secretary to update the hospital wage index no later than October 1, 1990 (and at least every 36 months thereafter) based on a survey of wages and wage-related costs in prospective payment hospitals. We interpret the committee report language as applying to changes to the wage index beginning in FY 1991. We are conducting a new wage survey and intend to implement a new wage index based on this survey in FY 1991 in a budget neutral manner.

Comment: One commenter indicated that in duplicating HCFA's construction of the wage index, several methodological shortcomings were discovered. Although the changes recommended by the commenter would have little impact in terms of aggregate Medicare payments, they could have a significant impact on the affected wage areas. Specifically, the commenter indicated that the data base contains data from hospitals that reported wages and hours over a period of time of less than or greater than 12 months. It was suggested that the short and long reporting periods be eliminated from the data base. Alternatively, the wages and hours reported for these short periods should be weighted to reflect a full 12-month period. The commenter also noted that HCFA has inflated the wages reported to a common date (August 31, 1985) using the year end data of the cost reporting period. The commenter suggested that if HCFA continues to use short and long reporting periods, the inflator used should be determined and calculated based on the midpoint of the reporting period. Finally, the commenter pointed out that the wages reported from hospitals with reporting years ending after August 31, 1985 were not deflated to the date, and some hospitals were identified as having a September 30, 1985 year end but were eliminated even though it represented a 13-month cost reporting period.

Response: We agree that it would be preferable for the wage index methodology to provide for special handling of hospitals with short or long cost reporting periods. However, because of the limited number of hospitals in certain MSAs upon which we can base the wage index values, we cannot, for purposes of determining the wage index values for these MSAs, eliminate these hospitals' data. Therefore, we have not accepted the commenter's recommendation to eliminate these short or long reporting periods. Furthermore, we agree with the commenter that a short reporting period (that is, 1 to 6 months) may not be representative of hospital's average wage levels. Therefore, we do not believe it would be appropriate to weight the wages and hours in a short reporting period to reflect a full 12-month period. We will, however, continue to analyze this issue in conjunction with the construction of the FY 1991 wage index from the new survey data.

We agree with the commenter's suggestion that the inflation factor should be applied to the hospital's data based on the reporting period's midpoint rather than its year end. This calculation will not affect most hospitals' data as a full year was reported and the inflation factor for these hospitals will be the same. In addition, because of this change, data from hospitals whose first year prospective payment system cost reporting period ended after August 31, 1985, will be deflated to the common point. We have also made corrections to the 1984 data for any reporting period data errors, including first year prospective payment system cost reporting periods ending September 30, 1985.

Comment: A few commenters suggested that a regional wage index be developed to replace the current wage index which is based on MSAs. The commenters believe that this type of wage index would be more accurate and fairer to rural hospitals that are near urban areas and must compete in the same labor markets.

Response: The MSA/NECMA definitions as established by the Office of Management and Budget are widely accepted and are used by many Federal programs to account for and recognize economic and population differences among urban areas. We do not believe that a regional wage index would account for wage differences experienced by areas that are geographically close to one another. We believe that a regional wage index would ignore the sometimes large variations that often exist within regions. We intend to examine the issue of labor market areas in conjunction with the development of the FY 1991 wage index.

C. Revisions to the Wage Index for Rural Counties Whose Hospitals Are Deemed Urban

Under section 1886(d)(8)(B) of the Act, for discharges occurring on or after October 1, 1988, hospitals in certain rural counties adjacent to one or more Metropolitan Statistical Areas (MSAs)

are considered to be located in one of the adjacent MSAs if certain standards are met. Because of this provision, as a part of the September 30, 1988 final rule, we reclassified the wage data for those rural areas as if the hospitals in those areas were located in the adjacent MSAs and recomputed the wage index values for the affected MSAs and rural areas.

Because inclusion of the wage data from rural hospitals that are considered to be located in an adjacent MSA under section 1886(d)(8)(B) of the Act resulted in the reduction of the wage index values of several MSAs and rural areas, Congress enacted section 8403(a) of Pub. L. 100–647. Under that provision, which added a new section 1886(d)(8)(C) to the Act, if the inclusion of wage data from rural hospitals now considered to be located in an urban area results in a reduction of the wage value for the affected MSA or rural area, then the wage index values for those affected areas must be recomputed as if section 1886(d)(8)(B) of the Act had not been enacted. The wage index value for those rural counties with hospitals that were deemed urban and that are affected by this recomputation must be calculated separately. This provision is effective for discharges occurring on or after October 1, 1989 and before October 1, 1991.

Therefore, we proposed to calculate the wage index for FY 1990 in the following manner with respect to the geographic classification of hospitals:

- MSAs whose wage index values are reduced because of the inclusion of wage data from hospitals in adjacent rural counties that have been deemed to be located in the MSAs would have their wage index values recalculated as if section 1886(d)(8)(B) of the Act had never been enacted; that is, data from the rural hospitals would be excluded in calculating these MSAs' wage index values.
- Each county whose hospitals have been deemed to be located in such an MSA would have its own unique wage index value, that is, a wage index value calculated on a county-specific basis.
- Rural areas whose wage index values are reduced by the exclusion of wage data from hospitals that have been deemed to be located in adjacent MSAs would have their wage index recalculated as if those hospitals were not deemed to be urban. In this case, the wage data for hospitals located in the rural counties that have been deemed urban would be included in two wage areas, that is, both the affected rural area and the county-specific wage area for the deemed hospitals. Those rural areas whose wage index values are increased by the exclusion of the wage data for those hospitals that have been deemed urban would retain the increased wage index value.

Using 1984 data, the proposed wage index value for every MSA in which rural hospitals have been deemed to be located was lower than it would have been if those hospitals had not been included. Therefore, the proposed wage index value for the MSA was computed without including data from the deemed rural hospitals and the proposed wage index value was computed on a county-specific basis for every rural county whose hospitals have been deemed to be urban. As proposed, there were seven rural areas that had their wage index value recalculated to include the hospitals that have been deemed urban. Since we have traditionally designated the urban and rural wage index as Tables 4a and 4b, as set forth in the addendum to this document, in the proposed rule, we designated this new county-specific set of wage index values as Table 4c.

Comment: We received a large number of comments suggesting that our proposal to implement section 1886(d)(8)(C) of the Act does not reflect the intent of Congress. Specifically, the commenters pointed out that in many counties whose hospitals were redesignated as urban under the provisions of section 1886(d)(8)(B) of the Act, our proposal to implement a county-specific wage index resulted in those hospitals receiving total prospective payments significantly lower than what they had received following implementation of section 1886(d)(8)(B) of the Act in FY 1989 because those hospitals would be subject to a lower wage index value. Many hospitals would have a wage index value lower than the Statewide rural wage index value. Commenters also noted that because of the low county-specific wage index value, in some cases, hospitals redesignated as urban would receive lower payments than when previously designated as rural. The commenters believe that Congress did not intend to reduce the wage index value applicable to these hospitals below what they had received when they were designated as rural hospitals.

The commenters offered several alternative approaches to rectify this situation. Some commenters suggested that the wage index value for hospitals in those counties redesignated as urban should not be allowed to fall below the Statewide rural wage index value. Alternatively, commenters suggested that the wage index value for these counties be calculated as the highest of the wage index value for the MSA to which they are deemed to belong, the county-specific wage index value, or the Statewide rural wage index value. Finally, other commenters suggested that we calculate the wage index value of the counties whose hospitals were deemed urban according to the provisions of section 1886(d)(8)(B) of the Act as added by section 4005(a) of Pub. L. 100–203, but calculate, the wage index values for the MSA and rural areas affected according to the provisions of section 1886(d)(8) of the Act as amended by section 8403(a) of Pub. L. 100–647. In this way, the hospitals deemed to be urban retain the benefit of a higher wage index value without affecting the values of the affected MSAs and rural areas. One commenter believes that we could use our general "exceptions and adjustments" authority in section 1886(d)(5)(C)(iii) of the Act to make any adjustment for the affected counties.

Reponse: Section 1886(d)(8)(C) of the Act is very specific as to how wage areas must be treated and does not give us discretion with regard to redesignated counties whose hospital wage index values are lower than the Statewide rural wage index value that would have applied to them absent this new provision. Given the specificity of the law, we believe this provision should be implemented as legislated by Congress.

With respect to Congressional intent, we find no evidence that Congress specifically intended to exempt from a county-specific wage index those redesignated counties whose hospitals have wage index values that are lower than the Statewide rural wage index value. The conference report notes only that the Secretary is expected to develop alternatives to minimize the impact of section 1886(d)(8)(C) of the Act on those hospitals, to be included in a report to Congress required under section 8403(b) of Pub. L. 100–647. (H.R. Rep No. 1104, 100th Cong., 2d Sess. 276 (1989).) If Congress had intended to exclude those counties from a county-specific wage index, we believe that the legislation would have been drafted accordingly.

With respect to the suggestion that the Secretary use the exceptions and adjustment authority as provided by section 1886(d)(5)(C)(iii) of the Act, we do not agree that it would be appropriate at this time to use this authority. Although we recognize that hospitals in certain counties will be disadvantaged by this provision during FY 1990 to the extent that they will receive a lower wage index value than if they had continued to be paid as rural

hospitals subject to the Statewide rural wage index value, these same hospitals received the greatest increases in payments during FY 1989 when they were paid on the basis of the wage index of the MSA to which they were deemed under the provisions of section 1886(d)(8)(B) of the Act. It is clear that Congress was aware of the impact this provision would have on redesignated hospitals. As noted above, if Congress had intended a different application of this provision, we believe that the law would have provided for it. Therefore, we do not believe it would be appropriate to use our exceptions authority and that section 1886(d)(8)(C) of the Act should be implemented as written.

Comment: Several hospitals that are located in rural counties and are now deemed urban and, therefore, have their own county-specific wage index values, suggested that the new county-specific wage index values are lower than the Statewide rural area values because the wage data for their hospitals are incorrect.

Response: Any hospital that believes that there is an error in its 1984 wage data may request that we make a correction. However, before a correction is made, the hospital must provide adequate documentation supporting a data correction to its fiscal intermediary. After verifying the documentation, the intermediary will submit the request along with a recommendation to HCFA's central office. If the correction is appropriate, HCFA will notify the regional office of the revised wage index value to be implemented effective for discharges occurring on or after the date the regional office is notified of the change. In accordance with our longstanding policy, changes to the wage index are implemented on a prospective basis only. (See our discussion on this issue in the September 30, 1988 final rule (53 FR 38496).)

D. Future Updates to the Hospital Wage Index

Section 1886(d)(3)(E) of the Act (as amended by section 4004(a) of Pub. L. 100–203) requires that wage indexes that are applied to the labor-related portion of the national average standardized amounts of the prospective payment system be updated not later than October 1, 1990 and at least every 36 months thereafter. This section further provides that the Secretary base the update on a survey of the wages and wage-related costs of hospitals in the United States that participate in the prospective payment system. The survey must measure, to the extent feasible, the earnings and paid hours of employment by occupational category and must exclude data with respect to the wages and wage-related costs incurred in furnishing skilled nursing facility services.

To accomplish this task, we developed two wage index survey forms. The first form (Form A) requested data similar to past surveys, with a few noted exceptions. In addition to the total wages and hours collected in past surveys, Form A also asked for data relative to the salary and hours associated with direct patient-care contracted labor, home office, and fringe benefits. Form A excluded salary and hours associated with the skilled nursing facilities and other related cost centers. The second form (Form B), in addition to the data requested on Form A, requested data relative to several occupational categories.

Before initiating the new hospital wage survey, the proposed forms (A & B) were submitted for prior consultation to various hospital industry representatives, including the major hospital associations, as well as to the fiscal intermediaries. We solicited comments on both forms, including the feasibility of obtaining accurate data. The comments we received suggested that most hospitals would be unable to accurately provide data by occupational categories at this time. As a result of the comments on these two forms, we have modified Form A, now referred to as HCFA–2561.

The HCFA–2561 is currently being used to collect data for the FY 1991 update to the wage index as required by section 1886(d)(3)(E) of the Act. However, before implementing this updated wage index or reaching decisions in the future on the collection of data by occupational categories and incorporating future wage survey forms into the hospital cost report, we are interested in receiving input from the public. Therefore, in the proposed rule, we solicited comments on the following issues:

- Should the wage index include data on contracted labor? For purposes of the wage index survey, contracted labor has been defined as direct patient-care contract labor such as registry nurses. Should the definition be expanded to include contracted services indirectly related to patient-care, such as billing or housekeeping services?
- What portion, if any, of home-office salaries and hours should be added to the wages and hours incurred solely by the hospital?
- Which fringe benefits, if any, should be included in computing the wage index? How should they be valued?
- Would hospitals be capable of providing and identifying verifiable salaries and hours by occupational categories? What occupational groupings would be appropriate?
- If occupational data were collected, what formula or methodology should be used in calculating an occupational-mix index? How would the methodology reflect the varying personnel and hiring decisions made by hospitals, that is, one hospital may hire registered nurses for patient-care whereas another hospital in the same geographic area may employ licensed practical nurses instead?
- Should the HCFA–2561 be incorporated into the hospital report in order to obtain wage data on a regular basis? What level of hospital-specific wage data should be available to the public, including other hospitals? Can the occupational category data be retrieved by adding new schedules to the hospital cost report?

In order to give the public ample time to thoroughly evaluate the six issues listed above, we stated in the proposed rule that we will accept comments on these issues up to September 30, 1989. Comments on these six issues should be submitted to the following address:

Health Care Financing Administration, Office of Reimbursement Policy, Division of Hospital Payment Policy, Attn: Wage Index Issues, 1–H–1 East Low Rise, 6325 Security Boulevard, Baltimore, Maryland 21207.

Because of the extended time for public comment, we have not responded in this final rule to any comments received in response to the proposed rule concerning future updates to the wage index. We plan to respond to these comments in the proposed rule concerning the FY 1991 changes to the prospective payment system.

IV. Other Decisions and Changes to the Regulations

A. Annual Publication of Prospective Payment Rates (Section 412.8)

The September 1, 1983 final rule (47 FR 39819) added a provision to the regulations stating that when prospective payment rates are not published by September 1 before the beginning of the Federal fiscal year in which the rates would apply, the rates in effect on September 1 of the year in question will apply unchanged for the following Federal fiscal year. This provision in § 412.8(b)(4) has been superseded by changes to the statute.

Specifically, section 1886(b)(3)(B) of the Act, as amended by section 9109(b) of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Pub. L. 99–272) and section 4002 of Pub. L. 100–203, specifies the update factors for prospective payment hospitals beginning in FY 1986 and each year thereafter. Because the law sets the rates for each Federal fiscal year, which are effective October 1 of each year, the provisions of § 412.8(b)(4) no longer conform to the law. Therefore, we proposed to delete this section.

Comment: We received a few comments regarding our proposal to delete the provision of § 412.8(b)(4) from the regulations. It was suggested that these regulations not be deleted but rather revised to state that in the event that revised prospective payment rates are not published by September 1, then the rates in the succeeding fiscal year will be the rates as of September 1, increased by the most recent hospital market basket forecast.

Response: We believe that it is unnecessary to include such a provision in the regulation. Section 1886(b)(3)(B) of the Act, as amended by section 9109(b) of Pub. L. 99–272 and section 4002 of Pub. L. 100–203, specifies the update factors for prospective payment hospitals, which for FY 1990 and each subsequent year is equal to the market basket percentage increase. Section 1886(b)(3)(B)(iii) of the Act defines the market basket percentage increase as the percentage, as estimated by the Secretary before the beginning of the applicable fiscal year, by which the cost of the mix of goods and services comprising routine, ancillary, and special care unit inpatient hospital services will exceed the cost of these goods and services for the preceding fiscal year.

We believe that we are required by the law to use the most recent hospital market basket forecast in making this estimate. In the absence of a published rate, the prospective payment rates will increase as of the succeeding fiscal year by an amount equal to the most recent forecasted increase in the hospital market basket, as prescribed by law.

In addition, since the update factors for prospective payment hospitals are set by law, the legislatively mandated factors would automatically be applied to the rates regardless of whether a notice was published timely. Given the fact that the update factors are subject to change annually based on recommendations submitted to Congress by the Department and ProPAC (sections 1886(e)(4) and 1836(e)(3)(A) of the Act, respectively), the market basket increase may not be the update factor prescribed by Congress for any given fiscal year. Therefore, since the law would take precedence over any regulations we may publish, we do not believe it is necessary to stipulate the update factor that would be applied to the rates if a notice of new rates is not published timely.

B. Burn Outliers (Section 412.84)

Section 4008(d)(1)(A) of Pub. L. 100–203 changed the marginal cost factor to 90 percent for day and cost outliers in DRGs related to burn cases. This provision was effective for discharges occurring on or after April 1, 1988 and expires as of October 1, 1989. We proposed to retain the marginal cost factor for cost outliers at 90 percent; however, we proposed to reduce the marginal cost factor for day outlier cases to 60 percent effective for discharges occurring on or after October 1, 1989 (that is, the same marginal cost factor as other DRGs). Therefore, we proposed to amend § 412.84 accordingly.

In the September 30, 1988 final rule (53 FR 38505), we indicated that ProPAC had issued a report that addressed outlier payments for burn cases and that we would review ProPAC's findings and recommendations to determine if changes in the burn outlier policy may be appropriate for FY 1990.

ProPAC's report indicated that increased outlier payments may only be appropriate for those cases treated in specialized burn centers and units. However, recognizing that no clear criteria currently exist to classify such centers, ProPAC postponed making specific recommendations pending further evaluation. While we recognize ProPAC's concern that outlier cases result in a more serious impact on specialized burn centers and units than to general hospitals treating burn cases, we generally do not believe it appropriate to create a new class of hospital (that is, burn hospitals and burn units) simply for purposes of targeting outlier payments.

As an interim measure, ProPAC recommended that burn cases be paid cost outliers only, based on a 90 percent marginal cost factor. In addition, ProPAC believes that the outlier payment pool for burn cases should be maintained at 19 percent of total payment for burn cases. This 19 percent figure represents the impact on burn outlier payments of increasing the marginal cost factor from 60 percent to 90 percent. ProPAC also recommended separate outlier thresholds for burn cases be established in order to maintain the 19 percent outlier payment pool.

While ProPAC's recommendation may target more burn outlier payments to specialized burn treatment centers, there is currently no statutory authority to eliminate day outlier payments. However, we agree that the 90 percent marginal cost factor may not be appropriate for less severe burn cases. Therefore, we believe it would be appropriate to reduce the marginal cost factor from 90 percent to 60 percent for day only outliers associated with burn cases since these generally represent less resource-intensive cases. Thus, as proposed, exceptionally costly day outliers, that is, those that meet both the day and cost outlier thresholds, would be paid the greater of 60 percent of the per diem Federal rate for each day beyond the length of stay threshold or 90 percent of the difference between adjusted charges and the cost thresholds.

Comment: Several commenters were concerned about our proposal to reduce the marginal cost factor for burn day outlier cases from 90 to 60 percent. One commenter stated that the reduction should be accomplished gradually over several years to give the affected hospitals time to adjust to the payment changes. Another commenter believes that lowering the marginal cost factor for day outliers to the same factor as all other day outliers reintroduces financial risk for hospitals that treat these cases and promotes the delivery of services in more costly settings. Also, this commenter states that the fact that HCFA is changing the policy so soon after its implementation (that is, April 1, 1988) violates the fundamental principle of the prospective payment system that the system is designed to assure hospital managers of predictability of rates and regulations.

Response: Our data show that specialized burn units generally receive more costly burn outliers cases that tend to be more resource intensive. General hospitals, on the other hand, mainly treat the less severe burn cases that may qualify as day outliers. We believe our proposed policy most closely achieves the policy goals of targeting outlier payments for the most costly burn cases, while at the same time maintaining outlier payments at approximately the same percentage of total payments for burn cases. We note that ProPAC supports this policy as an improvement over current law since it reduces the financial risk associated with treating burn cases at specialized centers.

With regard to the comment on violation of the principles of the prospective payment system, we note that the marginal cost factor for burn

outliers was revised to 90 percent as of April 1, 1988 because we were required to do so by the provisions of section 4008(d)(1)(A) of Pub. L. 100–203. This provision expires as of October 1, 1989. Thus, we believe that a change in outlier policy for burn cases should have been anticipated by hospitals treating these cases. We are retaining the 90 percent factor for cost outliers. However, absent this policy, the marginal cost factor for both day and cost burn outliers would have reverted to the factor used for all other outliers, that is, 60 and 75 percent, respectively.

C. Payments to Sole Community Hospitals (Section 412–92)

Section 1886(d)(5)(C)(ii) of the Act provides special payment protections under the prospective payment system to sole community hospitals (SCHs). The statute defines an SCH as a hospital that, by reason of factors such as isolated location, weather conditions, travel conditions, or absence of other hospitals (as determined by the Secretary), is the sole source of inpatient hospital services reasonably available to Medicare beneficiaries. The regulations that set forth the criteria that a hospital must meet to be classified as an SCH are at § 412.92(a). To be classified as an SCH, a hospital must either have been designated as an SCH prior to the beginning of the prospective payment system or meet one of the following requirements:

- It must be located more than 50 miles from other like hospitals.
- It must be located between 25 and 50 miles from other hospitals, and it must—

—Serve at least 75 percent of inpatients in its service area;

—Be isolated by local topography or extreme weather conditions for one month of each year; or

—Have fewer than 50 beds and would qualify on the basis of market share except that some patients seek specialized care unavailable at the hospital.

- It must be located between 15 and 25 miles from other hospitals and isolated by local topography or extreme weather for one month of each year.

SCHs are paid a blended rate based on 75 percent of the hospital-specific rate and 25 percent of the Federal regional rate. An SCH is eligible for a payment adjustment if, for reasons beyond its control, it experiences a decline in volume of greater than five percent compared to its preceding cost reporting period. (This adjustment is also available to a hospital that could qualify as an SCH but chooses not to be paid as an SCH.) In addition, an SCH is eligible for an adjustment to its hospital-specific rate if it adds new services or facilities. SCHs are also exempt from the percentage reductions in reasonable cost payments for capital-related costs, as provided in section 1886(g)(3) of the Act.

In the September 30, 1988 final rule (53 FR 38513), we noted, in response to several ProPAC recommendations concerning SCHs, that our analysis of the SCH provisions is an on-going process. We also noted that we would continue to study whether our criteria are appropriate for determining which hospitals are the sole source of care for Medicare beneficiaries and whether sufficient protections are in place to assure beneficiary access to inpatient hospital services in rural areas.

Our analysis indicates that some SCHs would receive higher Medicare payments if they were to forego SCH status and be paid at the national rate. We believe these SCHs may be reluctant to give up their status because they may have difficulty requalifying if circumstances change to make SCH status more favorable in the future.

With this concern in mind, we proposed a revision to § 412.92(b)(4)(iii). That section currently states that if a hospital cancels its classification as an SCH, it may not apply for reclassification as an SCH unless all hospitals within 50 miles of it have closed. Because we believe this provision is restrictive and may prevent some existing SCHs from relinquishing their status even though it might be financially advantageous for them to do so, we proposed elimination of the hospital-closure-within-50-miles provision in § 412.92(b)(4)(iii). Instead, we proposed that, if a hospital cancels its status as an SCH, it may requalify for classification as an SCH only after 1 full year has passed since the cancellation was effective and only if the hospital meets the criteria for qualification that are in effect at the time it reapplies.

Section 1886(d)(5)(C)(ii) of the Act provides for reasonable compensation for significant increases in operating costs resulting from the addition of new services or facilities. Although a similar provision was originally proposed by regulation, Congress explicitly provided for the payment adjustment for new inpatient facilities or services in section 9111(a) of Pub. L. 99–272, which amended section 1886(d)(5)(C)(ii) of the Act. The payment adjustment was established effective with cost reporting periods beginning on or after October 1, 1983 and before October 1, 1989 as a temporary measure until a permanent payment methodology could be developed to recognize significant distortions in operating costs resulting from the addition of new services or facilities. The regulations implementing the payment adjustment are at § 412.92(g).

To date, there has been no legislative change to establish a different payment methodology to provide reasonable compensation for significant cost increases resulting from the addition of new services or facilities. In view of the expiration of the statutory provision explicitly providing for this payment adjustment, we proposed to extend indefinitely by regulation the provisions at § 412.92(g) in order not to disadvantage any SCH that experiences a significant increase in operating costs resulting from new inpatient services or facilities.

Currently, if a hospital wishes to receive a payment adjustment because it experienced a significant volume decrease, it must submit a request for the adjustment to its intermediary along with documentation demonstrating the size of the decrease in discharges and explaining the circumstances giving rise to the decline in discharges and how they were beyond the hospital's control. The hospital must also furnish evidence of the actions it took to control costs in the face of the circumstances cited and the resulting decline in discharges. The intermediary reviews and analyzes the documentation and then forwards the documentation along with its analysis and recommendation on approval to HCFA. HCFA determines the volume adjustment within 180 days from the date it receives the hospital's request and all other necessary information from the intermediary.

In an effort to streamline and expedite this process, we proposed that this determination process be decentralized and handled entirely by the intermediaries. We believe that there is now sufficient experience reviewing hospitals' applications for volume adjustments for intermediaries to make these determinations. We also proposed to revise § 412.92(e)(3) to make this change. We proposed that the intermediaries use the same criteria for review that are currently in place in § 412.92(e). For further discussion of this process, see the September 1, 1983 final rule (48 FR 39786), the June 10, 1987 proposed rule (52 FR 22090), and the September 30, 1987 final rule (53 FR 38510).

We are preparing manual instructions for the intermediaries concerning the determinations of volume adjustments. We proposed that any requests for a volume adjustment that intermediaries have not submitted to HCFA by

September 30, 1989 be processed for a final determination by the intermediaries.

With the deterioration in the financial condition of many rural hospitals, our ability to define appropriately those hospitals that represent the sole source of care reasonably available to Medicare beneficiaries has become increasingly important. In this regard, our criteria for SCH designation have remained largely unchanged since the beginning of the prospective payment system. The regulations reflect an assumption that any hospital located more than 50 miles from the nearest like hospital is the sole source of care reasonably available; conversely, it is assumed that a hospital located within 25 miles of a like hospital would not be the sole source of care reasonably available unless weather conditions make other hospitals inaccessible at least one month per year.

For hospitals located between 25 and 50 miles of another hospital, a market test or a measure of extremes in topography or weather conditions is used to determine whether the hospital qualifies for SCH designation. As clarified in the September 30, 1988 final rule (53 FR 38510), a hospital located between 25 and 50 miles of a like hospital may qualify as an SCH if, during the cost reporting period ending before it applies for SCH status, it admitted at least 75 percent of all the hospitalized residents or 75 percent of all the Medicare beneficiaries who were admitted to any like hospital located within the larger of the requesting hospital's service area or a 50 mile radius. A hospital's service area is the area from which a hospital draws at least 75 percent of its inpatients or a service area defined by a health systems agency. Thus, while a hospital located between 25 and 50 miles of the nearest like hospital cannot be presumed to be or not to be an SCH, it can demonstrate by the size of its market share that it serves as the sole source of inpatient services reasonably available. Also, if a hospital located between 25 and 50 miles of the nearest like hospital has fewer than 50 beds, it can be deemed to meet the market share criterion if its intermediary certifies that the hospital would have met this criterion were it not for the fact that some Medicare beneficiaries or residents of the hospital's service area were forced to seek care outside the service area due to the unavailability of certain specialty services at the hospital with fewer than 50 beds.

An analysis performed by Systemetrics under contract to ProPAC found that there is an interrelationship between the definition of market area and market share. Generally speaking, the more broadly a hospital's market area is defined, the lower the hospital's market share percentage will be. Further, the greater the distance to the nearest neighbor hospital, the more broadly the market area is defined. One result of the relationship between market share and distance to the nearest hospital is that only a small percentage of the hospitals located more than 50 miles from another hospital would meet the market test. Moreover, the proportion of facilities meeting the 75 percent market test is smaller for those 35 to 39 miles from their nearest neighbor than for those isolated by 25 to 34 miles.

We have concluded from our analysis of the Systemetrics data that the current market share test is inappropriate for hospitals that are located more than 35 miles from a like hospital. The market area for these hospitals, as currently defined, is sufficiently broad to make the 75 percent market share standard unreasonable. The Systemetrics data show only nine percent of hospitals between 35 and 49 miles from another hospital had a market share greater than 75 percent even though the estimated travel time between two hospitals located 35 miles apart would be 45 minutes on the average.

We considered modifying the SCH criteria for hospitals located 35 to 50 miles from a like hospital by narrowing the definition of market area or relaxing the 75 percent market share standard for these hospitals, or implementing both of these changes. We rejected this approach for several reasons. First, we believe that the SCH criteria are already too complicated and that increasing the complexity by adding unique criteria for hospitals located between 35 to 50 miles would be undesirable. Second, given the worsening financial condition of many rural hospitals, we do not believe it would be appropriate to delay changing the criteria until the analyses that would be needed to develop appropriate modifications in the market share test are completed. Finally, considering that the average travel time between two hospitals 35 miles apart is 45 minutes, we believe it is reasonable to assume that a hospital more than 35 miles from a like hospital is the sole source of care reasonably available to Medicare beneficiaries. Therefore, effective October 1, 1989, we proposed to modify our SCH criteria as set forth at § 412.92(a)(1) and (2) to eliminate the market share test for hospitals located more than 35 miles from a like hospital.

We also invited comment on how the SCH criteria might be improved or simplified. In this regard, we stated that we are continuing to analyze whether modifications should be made in the market share test for hospitals located between 25 to 35 miles from a like hospital.

We believe the Systemetrics data confirm the appropriateness of our standard that a hospital located within 25 miles of a like hospital would not be the sole source of care reasonably available unless topography or weather conditions make other hospitals inaccessible at least 1 month per year. The data show that only one percent of hospitals within 25 miles of another hospital provide at least 75 percent of the inpatient services received by Medicare beneficiaries residing within their service area. However, concern has been expressed regarding our criteria in § 412.92(a)(2) and (3), which define isolation of hospitals due to local topography or periods of prolonged severe weather. Under current policy, we require that a hospital must document its inaccessibility for 30 consecutive days in each of the past 3 years in order to qualify as an SCH on this basis (see 48 FR 39781, September 1, 1983). The documentation must be substantiated by an outside source, for example, the State Highway Department or a local public safety official.

In the proposed rule, we stated that we are also considering modifying this policy to require the hospital to document its inaccessibility for 30 nonconsecutive days in 2 out of the last 3 years. We also solicited comments regarding whether this standard would be appropriate.

Comment: Many commenters wrote concerning our suggested changes in the SCH qualifying criteria. All approved of our proposal to eliminate the market share test for hospitals more than 35 miles from the nearest hospital. However, many commenters offered various alternatives to our criteria as follows: One commenter suggested that we abolish the current criteria and reinstate the guidelines that were in effect prior to the implementation of the prospective payment system. Another commenter suggested that we abolish distance as a measure and rely solely on whether a hospital meets the 75 percent market share standard. One commenter believes that SCH status should be granted to a hospital if it provides services that are not available from any other hospital within a 35-mile radius while another believes that we should consider travel time instead of mileage in determining SCH status.

Response: While we appreciate all of the commenters suggestions, we do not believe we can implement any of them at this time. For reasons discussed in detail in the January 3, 1984, final rule (48 FR 271), we replaced the discretionary SCH criteria we used prior to the implementation of the prospective payment system with more objective numerical standards. The current standards incorporate the principles of the criteria that were in effect prior to the implementation of the prospective payment system while at the same time ensuring consistency in classifying hospitals as SCHs. Moreover, the market share test is an operational measure of the variables that influence patients in their decision to seek care at a particular hospital. That is, a hospital's market share will increase if travel or weather conditions curtail access to another hospital, or if physicians admit patients primarily to that particular hospital. If patients commonly use other hospitals for services, we conclude that those alternative hospitals are accessible to them, and that they are not limited to obtaining care at only one hospital.

We chose not to use physician admitting practices as a separate variable because they are included within market share. Physician admitting practices are a major determinant of market share, so using market share as a criteria does include consideration of physician admitting practices. Also, we chose not to use availability of public transportation as a separate criteria because it is included within the market share criteria, and because public mass transit systems are not a common method of transportation for patients receiving inpatient services.

In response to other commenters, we do not believe we should limit our review of SCH qualifications solely to travel time or to the provision of specialty services not available from any other hospital within a 35-mile radius. As we have noted previously, travel time as a measure is subject to many variables such as traffic congestion, road conditions, and time of day. For instance, what might be a 15-minute trip under ideal conditions could be a substantially longer trip on wet or snowy roads or in heavy traffic. Specific travel conditions would have to be defined and each hospital's application reviewed against these specific conditions in order to achieve consistency and equity in the decision process. Since such specific conditions would be extremely difficult to define and more difficult to measure objectively, we do not believe travel time is as valid a measure as road miles.

Neither do we believe that provision of specialty services not offered by any other hospital within 35 miles should be the sole measure of an SCH. Not only would "specialty" services have to be specifically defined, but measures of the need for and use of such services would have to be established. Furthermore, we do not believe the SCH provision was enacted to protect hospitals providing unique specialty services. Rather, we believe its intent was to ensure Medicare beneficiary access to care ordinarily found in general community hospitals.

With regard to the commenter who suggested that we drop mileage as a criterion and consider only whether the hospital treats at least 75 percent of the patients admitted to a hospital within its service area, we do not believe this suggestion is equitable. As we noted in the proposed rule (54 FR 19650), the data gathered by Systemetrics in its study of rural hospitals and SCH criteria show that the more isolated a hospital is, the greater the chance that it does not meet the 75 percent market share test. Thus, a large number of truly isolated hospitals could not qualify for SCH status. In addition, only 3.3 percent of all rural hospitals meet the 75 percent market share test (before adjustment for specialized care obtained outside the service area of rural hospitals with fewer than 50 beds). Thus, this commenter's suggestion could result in only 89 hospitals nationwide meeting the proposed standard. We do not believe that such a restrictive standard would protect Medicare beneficiaries' access to care or would be in the best interest of the rural hospitals.

Finally, although we are not implementing any of the commenters' suggestions at this time, we will keep them all in mind as we continue to review the SCH qualifying criteria in conjunction with the comments we received on beneficiary access to care in rural areas.

Comment: One commenter suggested numerous revisions to our qualifying criteria ranging from redefining the service area as the smaller of a 35-mile radius from the hospital or the area from which a hospital draws at least 50 percent of its patients. The commenter proposed that we lower the market share test from 75 percent to 60 percent and that we lower from 35 miles to 25 miles the distance from another hospital as the presumptive proof of SCH status. The stated goal of all of these revisions was not only to assure reasonable access for Medicare beneficiaries, but also to improve financial benefits to rural hospitals.

Response: We do not agree with the premise for the commenter's suggestions. All of them would liberalize the SCH provisions beyond what we believe was Congressional intent in establishing this provision. For instance, granting SCH status to any hospital more than 25 miles from any other hospital would mean that a beneficiary located between the two hospitals would be no more than 12.5 miles from a hospital; we do not believe such a short distance reflects an accessibility problem.

Redefining the service area as the commenter suggested would result in a significant increase in the number of rural hospitals qualifying as SCHs and would include some hospitals that we believe do not represent the sole source of care reasonably available to Medicare beneficiaries. If a significant portion of the residents in a hospital's service area seek care from other hospitals, this indicates that alternative sources of inpatient care are reasonably available.

Although we are not accepting any of the commenter's specific suggestions at this time, we have concluded that the geographic area considered in the market share test is too broad. Under current policy, a hospital may qualify as an SCH if it admitted at least 75 percent of all the hospitalized residents or 75 percent of all the Medicare beneficiaries who were admitted to any like hospitals located within the larger of the requesting hospital's service area or a 50-mile radius. Consistent with our decision to eliminate the market share test for hospitals located more than 35 miles from a like hospital, we are narrowing the geographic area to take into account admissions to like hospitals located within the larger of the requesting hospital's service area or a 35-mile radius. To implement this policy, we are revising § 412.92(a)(2)(i) and (b)(1)(ii)(B). Moreover, we will continue to analyze whether modification in the SCH definitions are needed to ensure reasonable access to care. However, to the extent that rural hospitals require financial assistance and protection from closure, we believe these objectives should be accomplished in alternative ways—not by so liberalizing the SCH criteria that a large percentage of the rural hospitals would qualify as SCHs. We acknowledged that we stated in the proposed rule (54 FR 19651) that the improvements we proposed in the SCH qualifying criteria were made in recognition of the difficulties facing rural hospitals; however, we believe there is a

limit to the extent to which these difficulties should be resolved through the SCH provisions and even through the Medicare program.

We again acknowledge that we are keenly aware of the problems facing isolated rural hospitals and the potential consequences for Medicare beneficiaries should large numbers of these hospitals close. However, as we noted in the proposed rule as a part of our discussion on beneficiary access to care in rural areas (54 FR 19651), "A policy involving changes to the Medicare program alone would not be sufficient to assure essential access to rural health care. A viable and effective rural health care policy must involve Federal, State and local governments, and private insurers." As discussed below in section IV. D. of this preamble, we are continuing to receive comments solicited on this subject and will give all reasonable suggestions serious consideration.

Comment: Only two commenters responded to our proposal to liberalize the provision regarding road closing due to inaccessibility. Both favored our proposal, but believe it did not go far enough. That is, one commenter believes that the determination of accessibility should be arrived at by agreement between the State Highway Department and the hospital. The other commenter believes that while a highway department may consider a road passable, it might be highly inadvisable for a Medicare beneficiary to be driving on such roads.

Response: We are disappointed that our request for comment from interested parties did not generate greater response, and we appreciate the commenters who did address this issue. Neither, however, offered specific suggestions that can be implemented on a nationwide basis. We believe a determination of inaccessibility must be made by a disinterested party such as a State Highway Department and not by the affected hospital. This would be the only way to ensure consistency and impartiality.

Similarly, we agree that while it may be more difficult for aged Medicare beneficiaries to negotiate slippery roads, we do not know how this distinction can be made objectively. Differences in age and driving experience and skill are determining factors usually employed in deciding whether to attempt travel under difficult conditions. We know of no objective standards that can be implemented to measure such factors on an equitable basis. Therefore, we are not adopting the commenters' suggestions. However, we are modifying our policy to permit a hospital to qualify if it can demonstrate its inaccessibility for 30 nonconsecutive days in 2 out of the last 3 years before it applies. To clarify this point, we are revising § 412.92(a)(3).

Comment: All the comments we received on our proposal to transfer final processing of the SCH volume adjustment requests to the fiscal intermediaries were favorable. However, several commenters pointed out that we had not discussed hospital appeal rights following this transfer. They also urged HCFA review of the intermediary determinations to ensure timeliness, accuracy, and consistency. One commenter suggested that the current 180-day processing time be reduced to 90 days.

Response: We agree with the commenters' suggestions regarding appeal rights and HCFA oversight of intermediary determinations and we inadvertently neglected to mention these issues in our proposed rule.

Hospitals will retain the same appeal rights of intermediary determinations as they had of HCFA determinations. That is, if a hospital is dissatisfied with the intermediary's final determination, it may request a hearing before the provider Reimbursement Review Board as outlined at § 405.1836. Similarly, although we did not discuss in the proposed rule that we would maintain ongoing review of the intermediaries processing of hospitals' requests, these reviews will be conducted to ensure timeliness, accuracy, and consistency.

With regard to the commenter's suggestions that the alloted 180-day processing time for SCH applications be reduced from 180 to 90 days, we do not believe it is appropriate to impose such a short time frame on the intermediaries at this time. Certainly, we expect the intermediaries to process a hospital's request as rapidly as possible. However, we also recognize that because of other priorities and ongoing workloads, it may not always be possible for the intermediary to complete processing within a 90-day time frame. Therefore, while we are not adopting the commenter's suggestions, we are urging intermediaries to give these requests for volume adjustments a high priority and to process them as rapidly as possible.

Comment: Although we did not propose any changes in the payment methodology used to pay SCHs, we received three comments on this issue. One commenter pointed out that the current payment adjustment provides no incentive for a hospital to become an SCH. Two commenters stated that continuing to base SCH payments on the original base year costs does not adequately reflect current costs.

Response: We are aware that there are many hospitals that are entitled to the SCH adjustment but that have chosen not to apply for it because they receive greater payment under the prospective payment system using the fully national payment rates than they would as an SCH. However, as we have noted in the past, the current methodology is established by law. Therefore, we do not have the authority to alter this method.

We also recognize that, in some instances, it might be advantageous for a hospital to change its SCH status from time to time; that is, in some years, the national payment rates might be greater than the amount a hospital would receive as an SCH and, in other years, the opposite might be true. For this reason, we are relaxing the previous restriction on permitting a hospital to requalify for SCH status once it has relinquished its SCH designation.

Comment: One commenter requested that we clarify which qualifying criteria would be in effect if the criteria change between the time a hospital files for SCH status and the time a final determination is made on its application. The commenter also stated that if the later criteria are more favorable to the hospital, HCFA should permit the hospital to withdraw its application and refile it for consideration under the later criteria.

Response: Generally, a hospital's application will be considered using the criteria in effect at the time it submits its application to its intermediary. However, we agree with the commenter that if revisions to the regulations become effective prior to the HCFA regional office's issuing a final decision on the application, and if the hospital believes the revised criteria are more favorable to it or simplify its documentation requirements, the hospital may request that a determination be based on the later and more favorable criteria.

D. Beneficiary Access to Care in Rural Areas

The nation's rural health care system is undergoing a difficult period of transition in response to several complex factors including changing practice patterns, evolving delivery systems, regional economic change, facility conversion, declining admissions, patient mobility, and demographic change. These factors, coupled with the incentives for efficiency offered by Medicare's prospective payment system, present increasing pressures on the rural health care delivery system.

The challenge facing rural providers, State and local governments, Medicare, and other third-party insurers is to adopt policies that acknowledge the variety of factors affecting the long-term financial viability of rural providers and assure essential access to health care for rural residents.

As a long term initiative, we are evaluating whether refinements to the prospective payment system would be appropriate to improve our payment policy for rural hospitals. This evaluation includes—

- An assessment of whether the special payment protections for SCHs are adequate to provide beneficiaries with continued access to quality care;
- Examination of whether it would be appropriate to establish separate outlier thresholds for cases in urban and rural hospitals; and
- Research to replace the separate urban and rural rates with a single rate adjusted for severity and other factors that explain differential hospital cost experience.

Although we believe that it is important to implement appropriate Medicare payment policies for rural hospitals, we note that the critical issue facing the nation is assuring continued access to health care for all rural residents. Medicare payments account for 34 percent of rural hospitals' total revenues. Other revenue sources, such as Medicaid, private insurance, and self-pay, make up the remaining 66 percent of revenues. A policy involving changes to the Medicare program alone would not be sufficient to assure essential access to rural health care. A viable and effective rural health care policy must involve Federal, State and local governments, and private insurers.

To assist the Department in examining the many important issues affecting this principle of assuring "essential access", in the proposed rule, we requested comments on the following:

- How should the existing SCH policy be reformed and targeted to protect beneficiaries in rural areas with "essential access" problems?
- What are an appropriate operational definitions of "essential access" (for example, distance, market share, patient mobility, transportation, weather, or types of essential services provided)?
- What roles should Federal and State government play in identifying "essential access" facilities?
- Should the Federal government and States ensure that Medicaid payment policies acknowledge the need to assure "essential access" to care for beneficiaries in rural areas and, if so, how?
- Should States take actions to encourage third-party payors to acknowledge the need to assure "essential access" to care for rural residents?
- How can the rural transition grant program (authorized by section 4005(e) of Pub. L. 100–203) be targeted to specifically assist "essential access" facilities in planning, coordination, service delivery modification, and conversion efforts?
- How can the Fedral government best coordinate rural health policy with those of the State governments?

In order to give the public ample time to respond to the issues raised regarding "essential access" to health care by rural residents, the proposed rule stated that we would accept comments on these issues up to September 30, 1989. Comments on these issues should be submitted to the following address: Health Care Financing Administration, Office of Reimbursement Policy, Division of Hospital Payment Policy, Attn: Rural Access Issues, 1–H–1 East Low Rise, 6325 Security Boulevard, Baltimore, Maryland 21207.

As stated in the proposed rule, because these issues are not directly related to the Medicare prospective payment system, we are not responding to these comments in this final rule. However, we will take them into consideration as we develop a Departmental rural health policy designed to assure essential access to health care in rural areas.

E. Cancer Hospitals (Section 412.94)

Section 1886(d)(5)(C)(iii) of the Act authorizes special treatment for hospitals involved extensively in treatment for and research on cancer. In our regulations at § 412.94(a), we set forth the criteria a hospital must meet to be considered a cancer hospital. In § 412.94(b), we provide that, during its first cost reporting period subject to the prospective payment system, a qualifying cancer hospital may elect to be reimbursed on a reasonable cost basis, subject to the rate of increase limit. We have received inquiries concerning whether the provisions of sections 1815(e)(1) and 1886(g)(3) of the Act, which apply generally to prospective payment hospitals and not to hospitals excluded from the prospective payment system that receive payment on a reasonable cost basis, apply to these cancer hospitals since they are paid on a reasonable cost basis rather than on the basis of a prospective payment rate.

Section 1815(e)(1) of the Act provides that, effective with claims received on or after July 1, 1987, certain requesting prospective payment hospitals will receive payment for Medicare services on a periodic interim payment (PIP) basis. Under PIP, payment is based on the estimated annual payments for care provided to Medicare patients, and equal biweekly payments are made to hospitals without regard to the submission of individual bills. However, an end-of-year settlement in made once all bills for the year have been submitted and processed. Generally, under the provisions of section 1815(e)(1) of the Act and the regulations that implement it, § 412.116, an otherwise qualifying prospective payment hospital receives PIP only if its intermediary fails to make prompt payment of the hospital's bills, or if the hospital previously qualified as a hospital serving a disproportionate share of low-income patients or as a small rural hospital. Hospitals that are not "subsection (d) hospitals," as well as other providers such as skilled nursing facilities and home health agencies, continue to be eligible for PIP if they meet the other qualifying conditions.

Section 1886(g)(3) of the Act requires, effective October 1, 1986, specified reductions in the amount of payment for capital-related costs of inpatient hospital services of all prospective payment hospitals except sole community hospitals. This provision is set forth in regulation at § 412.113.

Except for sole community hospitals as provided in section 1886(g)(3)(B) of the Act, sections 1815(e)(1) and 1886(g)(3) of the Act apply to all subsection (d) hospitals and subsection (d) Puerto Rico hospitals (as defined in sections 1886(d) (1)(B) and (9)(A) of the Act, respectively). The authority in section 1886(d)(5)(C)(iii) of the Act that permits special treatment under the prospective payment system for a cancer hospital does not alter that hospital's status as a subsection (d) hospital (that is, a prospective payment hospital). Therefore, there is no legislative authority for exempting cancer hospitals from the provisions of sections 1815(e)(1) and 1886(g)(3) of the Act merely because they are paid on the same basis as hospitals excluded from the prospective payment system (that is, on a reasonable cost basis).

We have recently advised the HCFA regional offices to direct fiscal intermediaries that have not already done so to begin applying the provisions of §§ 412.113 and 412.116 to cancer hospitals receiving payments under § 412.94. The intermediaries were directed to apply the provisions of §412.113 retroactively, beginning with

portions of cost reporting periods occurring during FY 1987 as required by section 1886(g)(3) of the Act. However, the provisions of § 412.116 can not be applied retroactively due to the nature of PIP. Therefore, we directed the intermediaries to terminate current PIP payments to cancer hospitals that do not qualify to receive PIP under the provisions of § 412.116(b)(1) (i), (ii), or (iii). As with other prospective payment hospitals that no longer receive PIP, these cancer hospitals that have their PIP payments terminated will receive payments for inpatient operating costs related to care of Medicare patients on the basis of submitted bills rather than receiving equal biweekly payments.

Accordingly, we proposed to revise § 412.94(b) to clarify that cancer hospitals receiving payment on a reasonable cost basis retain their status as subsection (d) hospitals and are subject to all other regulations governing hospitals subject to the prospective payment system.

Comment: One commenter believes that Congress' intent was to remove PIP and to reduce capital payments only for hospitals subject to the prospective payment system and that such application was not intended to apply to cancer hospitals that qualify for reasonable cost reimbursement under the provisions of § 412.94. The commenter also noted that most Medicare intermediaries continued PIP and unreduced capital payments to the eight cancer hospitals that qualify for reasonable cost reimbursement and that such action is consistent with the intent of Congress.

Several commenters recognized that our clarification of the regulations at § 412.94 is consistent with the statute. However, they recommended that any cancer hospitals currently receiving PIP should continue to receive PIP. The commenters believe that continuation of PIP would prevent operational disruptions in these hospitals and, given the small number of cancer hospitals, would have only a minimal cost impact on the Medicare program.

Finally, one commenter requested that the preamble address whether qualifying cancer hospitals are exempt from the methodology regarding private room differential and from reasonable compensation equivalent (RCE) limits on physician Part A services, computations that are applicable to hospitals subject to the rate of increase limits under section 1886 (a) and (b) of the Act but not to hospitals paid under the prospective payment system.

Response: We believe, as some commenters agreed, that the statute requires application of the PIP provision and capital reduction provision applicable to prospective payment hospitals to qualifying cancer hospitals since they are also prospective payment hospitals. Therefore, we are required to apply these provisions to cancer hospitals. We believe that we cannot grant an exception to these provisions for the subject cancer hospitals, including, with regard to the PIP provision, cancer hospitals currently receiving PIP. The fact that some intermediaries did not properly apply the PIP and capital reduction provisions to the cancer hospitals is the reason that we are clarifying the regulation.

Section 412.94(b)(1) provides that qualifying cancer hospitals are to be paid on a reasonable cost basis under 42 CFR part 413. The methodology regarding the private room cost differential is set forth in § 413.53. Therefore, the regulations regarding the private room cost differential are applicable to cancer hospitals paid under reasonable cost reimbursement. The RCE limits are included in the regulations at § 405.482. Although the RCE limits are not included in part 413, they are an integral part of the applicable reasonable cost regulations. The latter regulations were formerly codified as subpart D of Part 405. When the prospective payment regulations now in Part 412 were recodified on March 29, 1985, all the reasonable cost regulations, including the RCE limits, were in subpart D. When the reasonable cost regulations were recodified as part 413 on September 30, 1986, certain regulations pertaining to teaching hospitals and provider-based physicians were not so recodified but remained in subpart D. However, the reference to the reasonable cost regulations in § 412.94 was changed from "subpart D of part 405" to "part 413". (See 51 FR 34793 (September 30, 1986).) Although not all the reasonable cost regulations were included in this new designation as they had been by the former designation, there was no intent to change their applicability. As we stated at the time, "In no instance do we intend any of the amendments to affect the substance of the Medicare rules." (51 FR 34790.) Thus, the applicability of the RCE limits to cancer hospitals did not change. They remain an integral part of determining payment for physican Part A services to a hospital that is paid on a reasonable cost basis. For § 412.94 cancer hospitals, payment is made under the reasonable cost regulations in part 413 and elsewhere and not under the prospective payment provisions of part 412. Therefore, these limits are applicable in determining the reasonable cost reimbursement for cancer hospitals. We have revised § 412.94(b)(1) to refer to the reasonable cost provisions of both subparts D and E of part 405.

F. Rural Referral Centers (Section 412.96)

Under the authority of section 1886(d)(5)(C)(i) of the Act, § 412.96 sets forth the criteria a hospital must meet in order to receive special treatment under the prospective payment system as a referral center (that is, payment is based on the other urban payment rate rather than the rural payment rate). One of the criteria under which a rural hospital may qualify as a referral center is to have 275 or more beds available for use.

A rural hospital that does not meet the bed size criterion can qualify as a rural referral center if the hospital meets two mandatory criteria (number of discharges and case-mix index) and at least one of three optional criteria (medical staff, source of inpatients, or volume of referrals). With respect to the two mandatory criteria, currently a hospital is classified as a rural referral center if its—

- Case-mix index is equal to the lower of the median case-mix index for urban hospitals in its census region, excluding hospitals with approved teaching programs, or the median case-mix index for all urban hospitals nationally; and
- Number of discharges is at least 5,000 discharges per year or, if fewer, the median number of discharges for urban hospitals in the census region in which the hospital is located. (We note that the number of discharges criterion for an osteopathic hospital is at least 3,000 discharges per year.)

1. Case-Mix Index

Section 412.96(c)(1) provides that HCFA will establish updated national and regional case-mix index values in each year's annual notice of prospective payment rates for purposes of determining referral center status. In determining the proposed national and regional case-mix index values, we followed the same methodology we used in the November 24, 1986 final rule, as set forth in regulations at § 412.96(c)(1)(ii). Therefore, the proposed national case-mix index value includes all urban hospitals nationwide and the proposed regional values are the median values of urban hospitals within each census region, excluding those with approved teaching programs (that is, those hospitals receiving indirect medical education payments as provided in § 412.118).

These values are based on discharges occurring during FY 1988 (October 1,

1987 through September 30, 1988) and include bills posted to HCFA's records through December 1988. Therefore, in addition to meeting other criteria, we proposed that to qualify for or to retain rural referral center status for cost reporting periods beginning on or after October 1, 1989, a hospital's case-mix index value for FY 1988 would have to be at least—

- 1.2187; or
- Equal to the median case-mix index value for urban hospitals (excluding hospitals with approved teaching programs as identified in § 412.118) calculated by HCFA for the census region in which the hospital is located as indicated in the table below.

	Region	Case-mix index value
1.	New England (CT, ME, MA, NH, RI, VT)	1.1598
2.	Middle Atlantic (PA, NJ, NY)	1.1595
3.	South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	1.2107
4.	East North Central (IL, IN, MI, OH, WI)	1.1644
5.	East South Central (AL, KY, MS, TN)	1.1598
6.	West North Central (IA, KS, MN, MO, NB, ND, SD)	1.1742
7.	West South Central (AR, LA, OK, TX)	1.2082
8.	Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	1.2379
9.	Pacific (AK, CA, HI, OR, WA)	1.2272

Based on the latest data available (through June 1989), the final national case-mix index value is 1.2205 and the median case-mix index values by region are set forth in the table below.

	Region	Case-mix index value
1.	New England (CT, ME, MA, NH, RI, VT)	1.1681
2.	Middle Atlantic (PA, NJ, NY)	1.1591
3.	South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	1.2122
4.	East North Central (IL, IN, MI, OH, WI)	1.1555
5.	East South Central (AL, KY, MS, TN)	1.1615
6.	West North Central (IA, KS, MN, MO, NB, ND, SD)	1.1741
7.	West South Central (AR, LA, OK, TX)	1.2094
8.	Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	1.2402
9.	Pacific (AK, CA, HI, OR, WA)	1.2432

For the benefit of hospitals seeking to qualify as referral centers or those wishing to know how their case-mix index value compares to the criteria, we are publishing the FY 1988 case-mix index values in Table 3c in section IV of the addendum to this final rule. In keeping with our policy on discharges, these case-mix index values are computed based on all Medicare patient discharges subject to DRG-based payment.

2. Discharges

Section 412.96(c)(2)(i) provides that HCFA will set forth the national and regional numbers of discharges in each year's annual notice of prospective payment rates for purposes of determining referral center status. As specified in section 1886(d)(5)(C)(i)(II) of the Act, the national standard is set at 5,000 discharges. However, we proposed to update the regional standards, which are based on discharges for urban hospitals during the fourth year of the prospective payment system (that is, October 1, 1986 through September 30, 1987), which is the latest year for which we have complete discharge data available.

Therefore, in addition to meeting other criteria, we proposed that to qualify for or to retain rural referral center status for cost reporting periods beginning on or after October 1, 1989, a hospital's number of discharges for its cost reporting period that began during FY 1988 would have to be at least—

- 5,000; or
- Equal to the median number of discharges for urban hospitals in the census region in which the hospital is located as indicated in the table below.

	Region	Number of discharges
1.	New England (CT, ME, MA, NH, RI, VT)	6749
2.	Middle Atlantic (PA, NJ, NY)	8138
3.	South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	6451
4.	East North Central (IL, IN, MI, OH, WI)	7850
5.	East South Central (AL, KY, MS, TN)	6113
6.	West North Central (IA, KS, MN, MO, NB, ND, SD)	5832
7.	West South Central (AR, LA, OK, TX)	4528
8.	Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	7403
9.	Pacific (AK, CA, HI, OR, WA)	4927

Based on the latest discharge data available, the final median number of discharges by census region are set forth in the table below.

	Region	Number of discharges
1.	New England (CT, ME, MA, NH, RI, VT)	6599
2.	Middle Atlantic (PA, NJ, NY)	7750
3.	South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	6328
4.	East North Central (IL, IN, MI, OH, WI)	7287
5.	East South Central (AL, KY, MS, TN)	5841
6.	West North Central (IA, KS, MN, MO, NB, ND, SD)	5683
7.	West South Central (AR, LA, OK, TX)	4586
8.	Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	7203
9.	Pacific (AK, CA, HI, OR, WA)	5296

We again note that to qualify for or to retain rural referral center status for cost reporting periods beginning on or after October 1, 1989, an osteopathic hospital's number of discharges for its cost reporting period that began during FY 1988 would have to be at least 3,000.

3. Retention of Referral Center Status

In the August 31, 1984 final rule, we announced that we were instituting a periodic review of the status of hospitals that qualified for a payment adjustment as referral centers (49 FR 34746). That final rule stated that this review would allow us to determine if these hospitals continued to meet the criteria for referral center status. The final rule stated that we would grant referral center status to a hospital for a 3-year period. At the end of the 3 years, we would evaluate a hospital's performance in meeting the criteria for qualifying as a referral center. A hospital would have been required to meet the criteria for at least 2 of those 3 years. If it did, the hospital would retain its referral center status for another 3-year period. If the hospital did not meet the criteria for at least 2 of the 3 years, the hospital's status as a referral center would end with the last day of the third cost reporting period for which it received the referral center payment adjustment.

Before we were able to implement this review, the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99–509) was enacted on October 21, 1986. Section 9302(d)(2) of Pub. L. 99–509 stated that any hospital that was classified as a rural referral center on the date of the enactment of that law will continue to be classified as a referral center for cost reporting periods beginning on or after October 1, 1986 and before October 1, 1989. Thus, any hospital that was classified as a referral center as of October 21, 1986 (the date of enactment of Pub. L. 99–509) is guaranteed this status through its cost reporting period beginning before October 1, 1989

We believe it is important that the rural referral center benefit be available only to those hospitals that continue to be in compliance with the statutory

criteria for designation. Therefore, with the expiration of the requirement of section 9302(d)(2) of Pub. L. 99–509 on October 1, 1989, we proposed to implement essentially the same retention criteria and methodology specified in § 412.96(f) that we had developed prior to the enactment of Pub. L. 99–509 with one variation. These previous criteria and methodology were discussed in the June 10, 1985 proposed rule (50 FR 24380) and the September 3, 1985 final rule (50 FR 35676).

Basically, to retain status as a referral center, a hospital must meet the criteria for classification as a referral center specified in § 412.96(b) or (c) for at least 2 of the 3 years after it qualifies as a referral center or it must qualify on the basis of the requirements for the current year. A hospital may meet the specific criteria in either paragraph for individual years during the 3-year period or the current year. For example, a hospital may meet the two mandatory requirements in § 412.96(c)(1) (case-mix index) and (c)(2) (number of discharges) and the optional criterion in paragraph (c)(3) (medical staff) during the first year. During the second and third year, the hospital may meet the criteria under § 412.96(b)(1) (rural location and appropriate bed size).

A hospital must meet all of the criteria within any section of the regulations in order to meet the retention criteria for a given year. That is, it must meet all of the criteria of § 412.96(b)(1) or § 412.96(b)(2) or § 412.96(c). For example, if a hospital meets the case-mix index standards in § 412.96(b)(2) in years 1 and 3 and the number of discharge standards in years 2 and 3, it would not meet the retention criteria. All of the standards must be met in the same year.

When we begin implementation of the provisions of § 412.96(f), some hospitals will have been classified as referral centers for more than 3 years without having been reviewed for continuing compliance with the referral center criteria. We proposed that the review process be limited to the hospital's compliance during the last 3 years. Thus, if a hospital meets the criteria for at least 2 of the last 3 years or for the current year, it would retain its status for another 3 years. No hospital would be subject to a review until the end of its third full cost reporting period as a referral center. Therefore, those hospitals that first qualified as referral centers as of April 1, 1988 by virtue of having at lest 275 beds will not be subject to review until the end of their their full cost reporting period as a referral center.

In the past few years, there have been several changes in the methodology used to set the case-mix index and the number of discharges criteria. We have constructed the following chart and example to aid hospitals that qualify as referral centers under the criteria in § 412.96(c) in projecting whether they will retain their status as a referral center.

Under § 412.96(f), to qualify for a 3-year extension effective with cost reporting periods beginning in FY 1990, a hospital must meet the mandatory criteria in § 412.96(c) for FY 1990 or it must meet the criteria for 2 of the last 3 years as follows.

For the cost reporting period beginning during FY	Use hospital's case-mix index for FY	Use the discharges for the hospital's cost reporting period beginning during FY	Use numerical standards as published in the Federal Register on
1990	1988	1988	Sept. 1, 1989.
1989	1987	1987	Sept. 30, 1988.
1988	1986	1986	Sept. 1, 1987.
1987	1985	1985	Nov. 24, 1986 and Aug. 24, 1987.

Example: A hospital with a cost reporting period beginning July 1 qualified as a referral center effective July 1, 1985. The hospital has fewer than 275 beds. Its status as a referral center is protected through the end of its cost reporting period beginning July 1, 1989. To determine if the hospital should retain its status as a referral center for an additional 3-year period, we would review its compliance with the applicable criteria for its cost reporting periods beginning July 1, 1987, July 1, 1988, July 1, 1989, and July 1, 1990. The hospital must meet the criteria either for its cost reporting beginning July 1, 1990 or for two out of the three past periods. For example, to be found to have met the criteria at § 412.96(c)(2) for its cost reporting period beginning July 1, 1988, the hospital's case-mix index value during FY 1986 must have equaled or exceeded the lower of the national or the appropriate regional standard as published in the September 1, 1987 final rule. The hospital's total number of discharges during its cost reporting year beginning July 1, 1986 must have equaled or exceeded 5000 or the regional standard as published in the September 1, 1987 final rule.

For those hospitals that seek to retain referral center status by meeting the criteria of § 412.96(b)(1) and (b)(1)(ii) (that is, rural location and appropriate bed size (500 or more beds for discharges occurring before April 1, 1988 and 275 or more beds thereafter)), we would look at the number of beds shown for indirect medical education purposes (as defined at § 412.118(b)) on the hospital's cost report for the appropriate year. As discussed above, we would consider only full cost reporting periods beginning on or after April 1, 1988 when determining a hospital's status under § 412.96(b)(1)(ii). This definition varies from the bed size criterion used to determine a hospital's initial status as a referral center because we believe it is important for a hospital to demonstrate that it has maintained at least 275 beds throughout its entire cost reporting period, not just for a particular portion of the year.

In the proposed rule, we projected that 25 percent of hospitals currently designated as rural referral centers will not meet the retention criteria. We are revising this figure to 19 percent based on more current data. Our projection is based on comparison of the existing rural referral centers' actual case-mix index values and number of discharges to the lower of the national or regional standards for the applicable years. Approximately 80 percent of the hospitals we project will not retain their status did not meet the proposed case-mix index criterion for qualifying as a rural referral center in FY 1990; based on MEDPAR data processed through December 31, 1988, the average case-mix index value for the hospitals not meeting the case-mix index criterion is six percent lower than the applicable criterion. Approximately 40 percent of the hospitals that we project will not retain status failed to meet the discharge standards. Twenty-five percent met neither the discharge nor the case-mix index criterion for FY 1990 or for 2 out of the last 3 years.

We received many comments concerning the various aspects of payment to rural referral centers. These comments and our response follow.

Comment: Several commenters suggested revisions in the manner in which we set the national and regional case-mix index criteria. That is, some believed that the case-mix index criteria should be based on the mean case-mix index of urban hospitals rather than on the median which we now use. One commenter suggested that we establish a hospital's average case-mix index value over a 3-year period and compare it to the average case-mix index value of urban hospitals for the same 3-year period. One commenter suggested that

we develop "proper" case-mix index criteria, but did not elaborate further. Finally, one commenter stated that establishing the case-mix index criterion standards at the median was unfair since it means that a rural hospital must maintain a case-mix index value higher than 50 percent of all urban hospitals.

Response: Section 9302(d)(1) of the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99-509) amended section 1886(d)(5)(C)(i) of the Act to statutorily establish case-mix index, annual number of discharges, and "any other criteria established by the Secretary" as one method under which a rural hospital can qualify as a rural referral center. Section 1886(d)(5)(C)(i)(II) of the Act specifically requires that a rural hospital have "a case mix equal to or greater than the *median* case mix for hospitals (other than hospitals with approved teaching programs) located in an urban area in the same region * * *" (emphasis added). Thus, we believe we are prohibited by law from implementing any of the suggestions offered.

We believe the current methodology is an equitable measure of the complexity of the cases treated by a hospital. As we have noted in previous discussions, Congress intended that the rural referral center adjustment be granted only to large facilities that treat "patients who require an intensity of resources beyond the capabilities of general community hospitals." [120 Cong. Rec. S3224-3226 (daily ed. March 17, 1983).] Congress also described referral centers as "large, technologically sophisticated hospitals * * * which are characterized by high case mix indices, diverse geographical patient origin, and numerous multidisciplinary medical education programs." [129 Cong. Rec. S3224-3226 (daily ed. March 17, 1983).] Thus, we believe Congress intended that qualification as a rural referral center be limited to those rural hospitals that can demonstrate through maintenance of high case-mix index values that they are truly providing highly specialized and intensive care.

In addition to the fact that the law requires that we establish the qualifying standards using the median case-mix index value of urban hospitals, we also believe the median is the appropriate measure. Means can be skewed by extremes either at the upper or lower ends. The median is less likely to be significantly altered by such extremes.

Finally, section 1886(d)(5)(C)(i)(I) of the Act, as originally added by section 2311(a) of the Deficit Reduction Act 1984 (Pub. L. 98-369), specifically states that certain operating characteristics of rural referral centers should be similar to those of a typical urban hospital located in the same census region. We believe the median more accurately reflects the typical urban hospital than would the mean. For these reasons, we do not believe it is unreasonable to expect rural hospitals seeking rural referral center status to meet a standard that exceeds that of 50 percent of the urban hospitals.

Comment: Although we did receive one favorable comment, many commenters disagreed with our proposal to implement triennial reviews of approved rural referral centers. Commenters' alternative suggestions to our proposal included extension of the grandfathering provision for 3 to 5 years, eliminating the reviews altogether, or delaying implementation of the review until proposed legislation that would extend the grandfathering provision has been acted upon.

Response: We continue to believe that it is equitable and reasonable to review periodically approved rural referral centers' compliance with the criteria in the statute and regulations to ensure that only those hospitals that are truly functioning as rural referral centers receive the special adjustment. Some hospitals qualified as rural referral centers based on their case-mix index values and number of discharges from 1981 and have not met the criteria since that time. We do not believe it is fair to the remaining rural hospitals to continue to recognize these hospitals as rural referral centers. Thus, we do not agree with the commenters who suggested either not doing the reviews at all or delaying them for several years.

We have compared data from the two groups of rural referral centers (those projected to retain their status and those projected to lose their status) to rural hospitals that are not referral centers and to hospitals located in other urban areas. These data show that the hospitals projected to retain referral center status do, in fact, bear a marked similarity to hospitals in other urban areas in comparison of both case-mix index values and numbers of discharges. Similarly, the statistics of rural referral centers projected to lose their status more closely resemble those of all other rural hospitals. For example, the rural hospitals retaining referral center status had an average case-mix index value of 1.2289 compared to an average case-mix index value of 1.2753 for hospitals in other urban areas; discharges averaged 8,185 and 8,009, respectively. The rural referral centers projected to lose their status had an average case-mix index value of 1.1275 and discharges of 5,412, which, while above the averages of 1.0739 and 1,753 for all other rural hospitals, are still enough lower than the statistics of other urban hospitals to illustrate their dissimilarity. In addition, we compared the FY 1987 average cost per case of rural referral centers projected to retain their status ($3,192) to the average cost per case of other urban hospitals ($3,967). The average cost per case for the referral centers projected to lose their status was $2,896 while that of all other rural hospitals was $2,462.

We believe that all of these data demonstrate that those rural referral centers that we project will lose their status more closely resemble other rural hospitals than they do other urban hospitals. We believe these data support reimplementation of the periodic reviews of rural referral center and the retention of only those hospitals that continue to meet the qualifying critiera.

With regard to proposed legislation that would extend the grandfathering provision, we cannot set policy or delay implementing regulatory provisions based on pending legislation that may be enacted in any one of several forms or may not be enacted at all. If legislation that has an impact on our policy concerning rural referral centers if enacted, we will comply with it as rapidly as possible.

Comment: One commenter suggested that the criteria to retain rural referral center status should be limited to case-mix index and referrals only and should not include number of discharges. Another commenter stated that the 5,000 national discharge standard that must be met to qualify for rural referral status is arbitrary and irrelevant in view of declining hospital utilization. A third commenter requested that we publish the specific number of Medicare discharges by hospital as we do case-mix index values, so that these numbers can be reviewed for accuracy.

Response: As noted above, section 1886(d)(5)(C)(i)(II) of the Act requires that we consider a rural hospital's annual number of total discharges along with its case-mix index value (as well as optional criteria as determined by the Secretary) in classifying rural hospitals as rural referral centers under this section. Specifically, that section of the Act requires that a hospital have "at least 5,000 discharges a year or, if less, the median number of discharges in urban hospitals in the region in which the hospital is located . . ." (We note that this section also provides that rural osteopathic hospitals must have 3,000 annual discharges.).

Thus, the fact that a hospital must maintain a specific number of discharges annually is not only a

statutory requirement, but the national level of 5,000 is also set by law, as is the requirement that the regional standards must be determined based on the median number of discharged from urban hospital in the same census region. Therefore, we do not have the authority to eliminate discharges as a standard or to alter the national number required. In addition, we believe it is reasonable to require a hospital to meet the same standards to retain rural referral center status as must be met to acquire that status during any given year.

It should also be noted that the 5,000 discharges standard is lower than the median number of discharges from eight of the nine census regions. In some regions, it is significantly lower (by more than 2,750 discharges annually in census region 2). In addition, data taken from hospital cost reports for cost reporting periods beginning during FYs 1987 and 1988 show that, on a national basis, although the median number of discharges from rural hospitals declined from 1,451 in 1987 to 1,403 in 1988, the median number of discharges from urban hospitals actually increased from 6,314 in 1987 to 6,335 in 1988. In view of these statistics, we believe the 5,000 total discharges standard is quite reasonable. Therefore, we are not adopting the commenters' suggestions.

Regarding the suggestion that we publish the annual number of Medicare discharges for verification purposes, we are uncertain how such information would benefit hospitals seeking rural referral center status. A hospital's total annual discharges are considered in determining its qualification as a rural referral center—not just its Medicare discharges. That number is obtained from the hospital's cost report for the appropriate year; the number of Medicare discharges is not a consideration in determining rural referral center status.

Although annual Medicare discharges may be obtained from central office records, we do not believe the number alone is of significance for hospitals in determining rural referral center status. In addition, since, for purposes of qualifying as a rural referral center, a hospital's discharges are determined based on each hospital's cost reporting year, it would be an administrative expense for HCFA to provide Medicare discharge information based on each hospital's cost reporting period. Therefore, we are not adopting the commenter's suggestion.

Comment: We received one comment suggesting that since the change in the rural referral center policy will have an impact on payments to hospitals, it should be implemented in a budget-neutral fashion.

Response: It has not been our practice to make budget neutrality adjustments to reflect increases or decreases in aggregate payments due to changes in hospital status for special payment provisions except when we have been required to do so by the statute. For example, although we made a budget neutrality adjustment as required by section 9302(d)(3) of Pub. L. 99-509 when the rural referral center case-mix index criterion was revised to exclude teaching hospitals effective for cost reporting periods beginning on or after October 1, 1986, we did not make subsequent adjustments to the payment rates for additional payments made to newly qualifying referral centers after that date and before the bed-size criterion was lowered effective April 1, 1988 by section 1886(d)(5)(C)(i)(I) of the Act. Therefore, we do not believe we should adjust the rates when hospitals no longer qualify. We have also taken this position for disproportionate share hospitals which must qualify annually for additional payments under the disproportionate share hospital provision.

Moreover, we believe a budget neutrality adjustment would be premature. Our projection of how many hospitals will not retain referral center status is based on available information; for example, we have used FY 1987 discharges in our estimate. We will not actually know how many hospitals lose their rural referral center status until the retention status determination is made by the Regional Office. This determination will include consideration of the hospitals' FY 1988 discharges. Also, affected hospitals will not lose their rural referral center status until the beginning of their next cost reporting period, which in many cases will be well into the next Federal fiscal year.

G. Disproportionate Share Adjustment (Section 412.106)

Section 8401 of Pub. L. 100-647 amended section 1886(d)(5)(F)(i) of the Act to extend payment of the disproportionate share adjustment through discharges that occur before October 1, 1995. Prior to enactment of Pub. L. 100-203, the payment adjustment for disproportionate share hospitals was to be made only through discharges occurring before October 1, 1990. We proposed to revise § 412.106(b)(1) and (b)(2) to conform our regulations with this statutory provision. We received no comments on this provision. Therefore, we are adopting our changes as proposed. However, we are taking this opportunity to clarify the regulations at § 412.106, which deal with the adjustment for disproportionate share hospitals. These revisions are not intended to revise the regulations (except for the change required by section 1886(d)(5)(F)(i) of the Act described above), but are merely designed to make the regulations easier to read and understand.

H. Indirect Medical Education Costs (Section 412.118)

Section 1886(d)(5)(B) of the Act provides that prospective payment hospitals that operate medical education programs receive an additional payment for the indirect costs of medical education. The regulations governing the calculation of this additional payment are set forth at § 412.118. Each hospital's additional indirect medical education payment is determined by multiplying the hospital's total DRG revenue by the applicable education adjustment factor.

Section 4003(a) of Pub. L. 100-203 revised section 1886(d)(5)(B)(ii) of the Act to reduce the education adjustment factor used to determine the indirect medical education payment for approximately 8.1 percent to approximately 7.7 percent for discharges occurring on or after October 1, 1988 and before October 1, 1990. Section 8401 of Pub. L. 100-647 extended the applicability of this education adjustment factor through discharges occurring before October 1, 1995. We note that the education adjustment factor is an approximation because the adjustment factor is applied on a curvilinear or variable basis. An adjustment made on a curvilinear basis reflects a nonlinear cost relationship; that is, each absolute increment in a hospital's ratio of interns and residents to beds does not result in an equal proportional increase in costs.

For discharges occurring on or after October 1, 1988 and before October 1, 1995, the indirect medical education factor equals the following:

$$1.89 \times \left[\left(1 + \frac{\text{interns and residents}}{\text{beds}}\right)^{.405} - 1\right]$$

For discharges occurring on or after October 1, 1995, the indirect medical education factor equals the following:

$$1.43 \times \left[\left(1 + \frac{\text{interns and residents}}{\text{beds}}\right)^{.5795} - 1\right]$$

We proposed to amend § 412.118 (c) and (d) to implement the provisions of amended section 1886(d)(5)(B)(ii) of the Act. We received no comments on these changes; therefore, they are adopted as proposed.

I. Interim Payment Provision for Hospitals with Unusually Long Lengths of Stay (Section 412.116)

On August 15, 1986, we published a final rule, effective for discharges occurring on or after July 1, 1987, which provided for the elimination of the PIP method of payment for all hospitals (51 FR 29386) except for services furnished by rural hospitals with fewer than 100 beds. Under PIP, a hospital is paid on an interim basis for services furnished to beneficiaries. These interim payments are based on the hospital's projected annual costs (for hospitals excluded from the prospective payment system) or payments under the prospective payment system for Medicare patients and are made in equal biweekly payments to the hospital without regard to the submission of individual bills. Any overestimation or underestimation of the hospital's actual costs or total prospective payments to the extent not adjusted during the year is adjusted at the time of cost report settlement.

Because prospective payments are based on discharge information and, therefore, cannot be made until after discharge, in the August 15, 1986 final rule, we included a provision for special interim payments for unusually long lengths of stay in prospective payment hospitals no longer receiving PIP. Under that provision, a hospital was permitted to request an interim payment if a Medicare beneficiary's stay exceeded 30 days. The amount of the interim payment was equal to the hospital's Federal rate per discharge multiplied by the appropriate DRG weighting factor. Only one interim payment per discharge was permitted. The amount of the interim payment was to be deducted from the final payment determined following the patient's discharge. No such provision was made for hospitals excluded from the prospective payment system since payment to these hospitals is not made on a per discharge basis and they have the option of submitting interim bills during an unusually long stay.

The provisions of the August 15, 1986 final rule were effectively invalidated by section 9311(a) of the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99–509), which added section 1815(e) of the Act to set forth specifically the circumstances under which PIP is available for services furnished by hospitals and other providers. Generally, inpatient hospital services furnished by hospitals excluded from the prospective payment system, as well as skilled nursing facility services, home health services, and hospice care, may be paid on a PIP basis. With certain exceptions, inpatient hospital services furnished by prospective payment hospitals are not eligible for payment on a PIP basis. Subsequently, we published a final rule with comment period on January 21, 1988 (53 FR 1621) which, in addition to implementing the provisions of section 1815(e) of the Act, eliminated the provision allowing a special interim payment for long stay cases set forth in the August 15, 1986 final rule.

In response to the January 21, 1988 final rule, we received a number of comments objecting to the elimination of the provision for special interim payments for unusually long lengths of stay. These commenters cited that we had originally provided for the special interim payments in order to alleviate the cash flow problems that certain hospitals might encounter after they no longer received PIP. The commenters indicated that a cash flow shortage continues to be a problem for a hospital that cannot receive any Medicare payment for a patient who has been in the hospital for an unusually long time. Some commenters believed that the problem was more acute for small hospitals or for rural hospitals, but all believed that not receiving an interim payment for a long-stay patient represented a hardship to the hospital. Others commented that the problem is exacerbated by the fact that the number of patients remaining in their hospitals awaiting skilled nursing facility (SNF) placement is increasing due to the shortage of beds in Medicare-participating SNFs in their areas.

In addition to the hardships raised by the commenters, the enactment on July 1, 1988 of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360) has had an adverse impact on prospective payment hospitals with unusually long lengths of stay. Before enactment of Pub. L. 100–360, a beneficiary was entitled to 90 days of inpatient hospital services during each spell of illness. In addition, a beneficiary could draw from a lifetime reserve of 60 days if that beneficiary's inpatient hospital days exceeded 90 days in a spell of illness. However, under section 1812(a)(1) of the Act, as amended by section 101(b) of Pub. L. 100–360, essentially unlimited inpatient hospital days are available for Medicare beneficiaries effective with services furnished on or after January 1, 1989. Therefore, effective January 1, 1989, in extremely long stay cases, Medicare payment for benefits that previously would have been exhausted will continue to accrue until discharge.

In light of the comments discussed above and the changes made by Pub. L. 100–360, we have reconsidered our position with respect to providing some form of special interim payment to prospective payment hospitals for long stays. We are revising the regulations at § 412.116 to state that hospitals subject to the prospective payment system that are not on PIP may request a special interim payment after a patient has been in the hospital at least 60 covered days and may request additional interim payments thereafter at intervals of at least 60 days. We believe that this

policy represents a reasonable and equitable solution for those hospitals that, with respect to extremely long stay cases, have been adversely affected by the elimination of PIP.

The amount of the initial interim payment will be equal to the rate for the DRG that results from applying the GROUPER classification to the diagnosis, procedures, and other pertinent information that is reported on the initial interim bill. The payment for the initial interim bill will be determined as if the bill were the final bill. That is, the intermediary will pay the hospital based on the DRG determined for the bill plus any outlier payments as of the date of the last day for which services have been billed. Subsequent interim bills, including the final bill, will be processed as adjustment bills, with payment determined as if the bill were the final bill. Generally, the adjusted payment from subsequent bills will result from outlier payments accruing since the previous bill. These special interim payments are effective [date of publication] for all qualifying current and subsequent inpatient hospital admissions.

As we stated above, this change to our payment policy is made primarily in response to the comments received on the January 21, 1988 final rule with respect to the special interim payments issue. We have made our final determination on this issue and are publishing it at this time because we believe it to be of paramount importance to the hospital industry as well as in the best interest of the public to issue as soon as possible. The other comments submitted in response to the January 21 final rule will be addressed in a separate document to be published in the future.

V. Other ProPAC Recommendations

As required by law, we reviewed the March 1, 1989 report submitted by ProPAC and gave its recommendations careful consideration in conjunction with the proposals set forth in the proposed rule. We also responded to the individual recommendations in the proposed rule. The comments we received on our treatment of the ProPAC recommendations are set forth below along with our responses to those comments. However, if we received no comments from the public concerning a ProPAC recommendation or our response to that recommendation, we have not repeated the recommendation and response in the discussion below. Recommendations 1 through 7 concerning the update factors are discussed in Appendix B of this document. Recommendation 13 concerning reassignment of patients with Guillain-Barre syndrome is discussed in section II.B. of this preamble.

A. Adjustments to the Prospective Payment System Payment Formula

Indirect Medical Education Adjustment (Recommendation 8)

Recommendation: The Secretary should seek legislation to reduce the indirect medical education adjustment from 7.7 percent to 6.6 percent for FY 1990. This reduction should be implemented in a budget neutral fashion with the savings returned to all hospitals through corresponding increases in the standardized amounts. ProPAC estimates that the indirect medical education adjustment should be 4.4 percent. However, concern about implementing such a large reduction led ProPAC to recommend that only one-third of the total reduction be implemented this year. ProPAC also recommends that further reductions should be made only after review of costs and analysis of impact.

Response in the Proposed Rule: We agree that the current indirect medical education adjustment paid to teaching hospitals is excessive and should be reduced. We believe that the adjustment should be reduced to 4.05 percent for each 10 percent increment in the intern and resident-to-bed ratio applied on a curvilinear basis. That figure represents our estimate of the actual impact of the indirect costs of teaching activity on hospital costs. We note that this figure does not differ significantly from the ProPAC estimate, which is 4.4 percent for each 10 percent increment in the ratio of interns and residents-to-beds.

Our analyses indicate that teaching hospitals have had favorable Medicare operating margins under the prospective payment system. Hospitals, on average, experienced operating margins of 5.3 percent during FY 1987. Teaching hospitals, on the average, experienced higher Medicare operating margins. Teaching hospitals with an intern and resident-to-bed ratio of less than 25 percent had Medicare operating margins of 7.6 percent during FY 1987; teaching hospitals with greater than a 25 percent intern and resident-to-bed ratio had Medicare operating margins of 13.6 percent on average during FY 1987.

We believe that teaching hospitals have fared exceptionally well under the prospective payment system and are able to absorb a reduction in the indirect medical education adjustment. Therefore, while we recognize that a change in the adjustment from 7.7 percent to 4.05 percent is sizeable, we do not believe that gradually reducing the adjustment, as ProPAC has recommended, is justified. Moreover, in view of the budgetary constraints, we believe it would be inappropriate to pay in excess of the estimate of the actual indirect costs of teaching activity. Further, because we believe payments to other hospitals are adequate, we believe that the change in the indirect medical education adjustment formula should not be implemented in a budget neutral fashion.

Comment: Several commenters objected to our recommendation concerning the adjustment factor for indirect medical education. Some commenters urged that we accept ProPAC's recommendation for a phased-in reduction of the adjustment, that is, for FY 1990, from 7.7 to 6.6 percent. Others objected to any reduction in the adjustment.

Response: We want to note that we did not propose to reduce the adjustment for indirect medical education in the proposed rule. Since the current adjustment is required by section 1886(d)(5)(B)(ii) of the Act, any change to the formula would require legislation. In the proposed rule, we were responding to a recommendation submitted by ProPAC that the Secretary seek legislation to reduce the adjustment formula. We responded that we concurred with ProPAC that the current formula results in an adjustment that is excessive and indicated that we believe the adjustment should be reduced from the current 7.7 percent to 4.05 percent (54 FR 19655).

We based our recommendation on the results of a 1985 study conducted by the Congressional Budget Office (CBO) that shows that the average cost per Medicare discharge increases by 4.05 percent for each 10 percent increase in the intern-to-bed ratio. A more recent study conducted by CBO ("Setting Medicare's Indirect Teaching Adjustment for Hospitals," May 1989) found that, depending on the model used, the adjustment factor could range from a low of 3.5 percent to a high of 5.2 percent. In addition, a study by the General Accounting Office (GAO) (as well as the ProPAC study) confirms that the current adjustment is excessive. (GAO Report No. HRD-89-33, January 5, 1989, "Medicare Indirect Medical Education Payments Are Too High.") GAO used several different models to estimate the effect of teaching programs on Medicare inpatient operating costs per discharge. Depending on the model used in the analysis, GAO estimated that the teaching effect on the Medicare cost per discharge ranges from 3.73

percent to 6.51 percent. The model that includes the Medicare payment variables, outlier cases, and bed size estimates the teaching effect at 4.05 percent.

B. Quality of Care

Evaluation of PRO Review of Quality of Care (Recommendation 14)

Recommendation: The Secretary should evaluate the impact of the PROs on quality of care. Intensified analysis of the PRO findings and validation of the PRO quality review process should be included in the evaluation. The validity, reliability, and efficiency of the PRO quality screens should receive special emphasis in the evaluation. In addition, the Secretary should continue to develop, test, and implement more sophisticated methods of inpatient and outpatient quality review. The Secretary should also develop additional mechanisms to identify and evaluate quality of care beyond the immediate period of hospitalization, placing more emphasis on outcomes of care.

Response in the Proposed Rule: We agree with the recommendation for evaluation of the impact of PROs on quality of care. We have the following two mechanisms in place that evaluate a PRO's application of quality screens:

- An independent contractor, the so-called "SuperPRO" (currently Systemetrics, Inc.), validates the determinations made by a PRO specifically to identify quality issues that should have been addressed by the PRO using generic screening criteria. This review is a rereview of the medical records originally examined by the PRO. Whenever discrepancies arise, the PRO is given an opportunity to rebut the SuperPRO's findings. The final SuperPRO decisions are used as educational tools for PROs. HCFA also reviews these decisions to identify areas in which corrective action is needed. During the PRO contract negotiations, SuperPRO findings, including those related to generic quality screens, will be considered in the PRO evaluation process.
- The Peer Review Organization Monitoring Protocol and Tracking System (PROMPTS) monitors the PROs performance in the area of quality of care. PROMPTS involves regional office rereview of PRO clinical decisions, including generic screen failures. If the regional office disagreements with a PRO's decisions exceeds a specific threshold, the PRO must submit a corrective action plan. These corrective actions are then monitored by HCFA, and subsequent SuperPRO findings are closely examined to monitor a PRO's performance. We routinely analyze those areas where the disagreement rate exceeds the threshold and require the PRO to take additional corrective action, if necessary. Additionally, the PRO's performance in this activity is considered in the PRO evaluation process.

SuperPRO and PROMPTS are essential parts of the PRO evaluation process and are used to carefully monitor and evaluate the validity, reliability, and efficiency of PRO application of quality screens. HCFA agrees with ProPAC's recommendation that the Secretary should continue to develop, test, and implement more sophisticated methods of inpatient and outpatient quality review.

Additionally, we are developing methodology for the PROs to use in proposing pilot projects in each of these areas. For example, we will be looking at proposals under which the PROs would review the quality of care in physicians' offices and in other outpatient settings. The pilot studies would be designed to track the patient across all settings in which care is received to assess health longitudinally. We also will be planning pilot projects under which PRO review will be lessened in hospitals whose performance appears superior, as judged by such things as consistently lower than expected risk-adjusted mortality and rehospitalization rates. This will help us to determine whether patient outcomes in these hospitals differ significantly from those where the normal PRO review process is in place.

Comment: One commenter disagreed with our assertion that our existing PRO review activities are sufficient. The commenter noted that these activities represent simply administrative tools used in the administration of the program and that it is time to undertake a thorough, independent review of the impact of PROs on quality of care for Medicare beneficiaries.

Response: We do not agree that all of the activities we cited are mere evaluative tools and, thus, simply administrative mechanisms used in the proper and efficient administration of the program. We are, however, about to begin a demonstration to review services furnished by physicians in various settings (ranging from inpatient hospital services to those furnished in physicians' offices). This review, which will include reviews of beneficiaries who have been hospitalized, will enable us to discern the outcomes experienced by beneficiaries.

In addition, we have begun a project, which collects abstracted clinical data, to detect deteriorations of improvements in the medical treatment of Medicare beneficiaries. These may be measured by changes from year to year in the incidence of interventions such as hospitalization or by diagnostic or therapeutic interventions in the ambulatory setting and in the outcomes of such interventions as measured by mortality, morbidity, disability, and expenditures. To establish a baseline measure of health and functional statutes, we are considering developing a registry that will contain assessments of the condition of the Medicare beneficiary at the time of entry and at appropriate intervals thereafter. Such information will permit more effective evaluation of trends by taking into account the variations in the initial condition of the beneficiary.

The data generated from these and other pilot projects will allow us to refine goals and objectives for the program based upon outcome measurements. While this also could be considered part of good program administration, we view it as an assessment of the program's overall impact. Any other measurement activity would require baseline comparative data, which are not currently available.

C. Ambulatory Surgery Payment

1. Medicare Payment for Hospital Outpatient Surgery (Recommendation 16)

Recommendation: Beginning in FY 1990, Medicare payment for the facility component of hospital outpatient surgery including capital should be entirely prospective. Separate rates should be established for each of the six groups proposed for payment of services furnished in ambulatory surgery centers (ASCs). The rate for FY 1990 should be based on a blend of hospital-specific costs, average hospital costs, and the rate paid to freestanding ASCs. The rate should be updated annually.

The level of the prospective rates should be the same in FY 1990 as they would have been under current policy. Payments should be adjusted to reflect differences in area wages. These changes in hospital outpatient surgery payment policy should apply to the list of ASC-approved procedures only; other Medicare payment provisions should continue for all other procedures. ProPAC does not recommend special treatment of eye and ear specialty hospitals.

Response in the Proposed Rule: We agree with ProPAC's objective to develop a prospective payment system for hospital outpatient ambulatory surgical services. However, we do not

agree with the approach ProPAC has recommended. As we stated in our interim report to Congress last year on this subject, a prospective payment system for hospital outpatient ambulatory surgical services should be based on two basic principles. First, Medicare program outlays should be no greater under a hospital outpatient prospective payment system than under the current system. Second, the prospective payment system should create a level playing field between ASC and hospital outpatient departments; that is, any difference between hospital-based payments and ASC payments should be based on justifiable differences in cost.

We plan to continue studying different approaches to incorporate hospital outpatient surgical services into a prospective payment system that is based on the principles stated above. Thus, we recommend no further changes to the hospital outpatient ambulatory surgical payment system at this time.

Comment: We received one comment, which was from ProPAC. While ProPAC basically agrees with the premise of our response in the proposed rule, it continues to recommend an interim prospective payment system for hospital outpatient surgeries. In addition, ProPAC recommended an investigation of ways to improve data from ASCs.

Response: We continue to believe we should not support any changes in Medicare payment policy for hospital outpatient surgical procedures at this time. Instead, we will continue in our efforts to develop a fully prospective payment system for all hospital outpatient services as mandated by section 1135(d) of the Act, as enacted by section 9343(f) of Pub. L. 99–509.

ProPAC's comment stated that ProPAC agreed with us that an outpatient prospective payment system should recognize justifiable differences in costs of furnishing services between hospital outpatient departments and ASCs. However, while ProPAC identified several factors that would account for the cost difference, ProPAC stated that the effect on costs in not understood and proposed that the interim system give "less prominence" to the freestanding ASC rates in establishing the outpatient rates. In this regard, since Congress mandated that any such differences in costs between ASCs and hospital outpatient departments be taken into account in establishing a prospective system (section 1135(d) of the Act), we do not believe a prospective payment system should be implemented. In addition, ProPAC's concern regarding data constraints with respect to ASC rates further justifies our position to make no changes at the present time.

Our recommendation is based on the fact that we do not have sufficient data at this time to assess the impact the proposed changes would have on beneficiaries, hospitals, and the Medicare program. We are only just beginning to receive the first cost reports reflecting the current payment system for ambulatory surgical procedures in hospitals. In addition, various studies are now being conducted that should provide valuable data when completed. We believe a move from the current system to a new system on a temporary basis would be very disruptive to the industry, and implementing the system would place a significant strain on our current resources, particularly in such a short period of time as the ProPAC's proposal would require. Therefore, we continue to recommend no further changes at this time.

2. Beneficiary Liability for Hospital Outpatient Surgery (Recommendation 17)

Recommendation: The Secretary should modify the methodology used to determine Medicare Part B coinsurance for certain ambulatory surgery services performed in hospital outpatient departments. Currently, beneficiary coinsurance is based on hospital submitted charges. ProPAC believes that beneficiary coinsurance should be limited to 20 percent of the payment amount allowed by Medicare. The Medicare program should bear the costs of the change.

Response in the Proposed Rule: As was stated in our response to Recommendation 16, we oppose making any changes to the present payment system for ambulatory surgical services. Therefore, we would be unable to implement this ProPAC recommendation for the present time.

In addition, the present system pays in the aggregate for surgery performed in a hospital outpatient setting based on the lesser of cost or charges or a blend of a hospital-specific amount and the ASC payment amount. Because the system is based on payments in the aggregate, calculated upon retroactive settlement, it is not possible to determine the actual payment amount based on individual bills, as would be necessary to implement ProPAC's proposal. Therefore, we believe that no changes should be made at this time.

Comment: In its comments on the proposed rule, ProPAC reiterated its position that the Medicare program should assume responsibility for 80 percent of the payment amount. ProPAC recommended that the method for calculating part B coinsurance for hospital outpatient surgery be modified.

Response: As we stated above, we recommend no change to the present payment system. This being the case, ProPAC's recommendation, which is based on a fully prospective payment system, would not apply under the present system. Under the present system, Medicare payment is not determined on an individual beneficiary basis but is made in the aggregate for all ASC beneficiary services furnished during the cost reporting period. Therefore, we will give this recommendation consideration after a prospective payment system for all outpatient services is in place.

VI. Other Required Information

A. Effective Dates

The effective date of this final rule (including the addendum and appendixes) is October 1, 1989. However, the changes we are making to § 412.116 concerning special interim payments to hospitals not receiving PIP for unusually long lengths of stay are effective on September 1, 1989.

B. Waiver of 30-Day Delay in the Effective Date

We ordinarily provide for a 30-day delay in the effective date of a substantive final rule. However, if adherence to this procedure would be impractical, unnecessary, or contrary to public interest, we may waive the delay in the effective date. As discussed in detail in section IV.I. of this preamble, on January 21, 1988, we published a final rule with comment period that set forth, in part, the circumstances under which a prospective payment hospital could receive PIP payments for the services it furnishes. That rule implemented the provisions of section 9311(a) of Pub. L. 99–509, which effectively invalidated an August 15, 1986 final rule in which we had eliminated PIP for all hospitals except small rural hospitals.

Although the August 15, 1986 final rule had provided for a special interim payment to prospective payment hospitals not receiving PIP for unusually long stays, we did not make that same provision in the January 21, 1988 final rule. However, in this final rule, after consideration of the comments we received in response to the January 21, 1988 final rule concerning the special interim payment and because of the elimination of a day limitation on hospital inpatient services by section 101(b) of Pub. L. 100–360, we have decided to restore the special interim

payment to prospective payment hospitals not receiving PIP.

We have made this change effective on September 1, 1989, for all current qualifying inpatient hospitals admissions. If we were to provide a 30-day delay in the effective date of these changes, hospitals experiencing these unusually long stays would be required to wait another 30 days before requesting a special interim payment and thus be deprived of the benefits of this change. Thus, a 30-day delay in effective date would be contrary to public interest. For these reasons, we find good cause to waive the normal 30-day delay in effective date for the changes made to § 412.116.

C. Paperwork Reduction Act

This final rule does not impose information collection requirements. Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501–3511).

D. List of Subjects in 42 CFR Part 412

Health facilities, Medicare.

42 CFR part 412 is amended as set forth below:

Chapter IV—Health Care Financing Administration, Department of Health and Human Services

Subchapter B—Medicare Programs

PART 412—PROSPECTIVE PAYMENT SYSTEM FOR INPATIENT HOSPITAL SERVICES

A. The authority citation for part 412 continues to read as follows:

Authority: Secs. 1102, 1122, 1815(e), 1871, and 1886 of the Social Security Act (42 U.S.C. 1302, 1320a–1, 1395g(e), 1395hh, and 1395ww).

Subpart A—General Provisions

B. Subpart A is amended as follows:

§ 412.8 [Amended]

In § 412.8, paragraph (b)(4) is removed.

Subpart F—Payment for Outliers

C. Subpart F is amended as follows:

§ 412.84 [Amended]

In § 412.84(k), the phrase "and before October 1, 1989" is removed, and the cross reference to "paragraph (i)" is revised to read "paragraph (j)."

Subpart G—Special Treatment of Certain Facilities

D. Subpart G is amended as follows:

1. In § 412.92, the introductory text of paragraph (a) is republished; in paragraph (a)(1), the introductory text of paragraph (a)(2), and paragraph (a)(2)(i), the number "50" is revised to read "35"; paragraph (a)(3) is revised; in paragraph (b)(1)(ii)(B), the number "50" is revised to read "35"; paragraph (b)(4)(iii) is revised; in the introductory text of paragraph (e)(3) and paragraph (e)(3)(i), the term "HCFA" is revised to read "the intermediary"; paragraph (e)(3)(ii) is revised; in paragraph (e)(3)(iii), the term "HCFA" is revised to read "the intermediary"; and, in paragraph (g)(6), the phrase, "beginning before October 1, 1989" is removed. The changes read as follows:

§ 412.92 Special treatment: Sole community hospitals.

* * * * *

(a) *Criteria for classification as a sole community hospital.* HCFA classifies a hospital as a sole community hospital if it is located in a rural area (as defined in § 412.62(f)), and meets one of the following conditions: * * *

(3) The hospital is located between 15 and 25 miles from other like hospitals but because of local topography or periods of prolonged severe weather conditions, the other like hospitals are inaccessible for at least 30 days in each 2 out of 3 years.

(b) *Classification procedures.* * * *

(4) *Cancellation of classification.* * * *

(iii) If a hospital requests that its sole community hospital classification be cancelled, it may not be reclassified as a sole community hospital unless it meets the following conditions:

(A) At least one full year has passed since the effective date of its cancellation.

(B) The hospital meets the qualifying criteria set forth in paragraph (a) of this section in effect at the time it reapplies.

* * * * *

(e) *Additional payments to sole community hospitals experiencing a significant volume decrease.* * * *

(3) * * *

(ii) The intermediary makes its determination within 180 days from the date it receives the hospital's request and all other necessary information.

* * * * *

2. In § 412.94, paragraph (b)(1) is revised and a new paragraph (b)(4) is added to read as follows:

§ 412.94 Special treatment: Cancer hospitals.

* * * * *

(b) *Payment.* (1) A hospital meeting the criteria in paragraph (a) of this section may elect, during its first cost reporting period subject to the prospective payment system, to be paid on a reasonable cost basis under part 413 of this chapter (and under other regulations governing reasonable cost in subparts D and E of part 405 of this chapter), and subject to the rate of increase limit under § 413.40 of this chapter.

* * * * *

(4) A hospital that elects reasonable cost reimbusement is otherwise subject to the prospective payment system with respect to hospital inpatient services, as provided in § 412.20. The provisions in §§ 412.113 and 412.116 concerning payment for capital-related costs and method of payment for inpatient hospital services, respectively, are applicable to such a hospital.

3. In § 412.96, paragraph (f) is revised to read as follows:

§ 412.96 Special treatment: Referral centers.

* * * * *

(f) *HCFA review of referral center status.*—(1) *General rule.* The status of each hospital that is receiving a referral center adjustment is reviewed by the HCFA regional office every 3 years to determine if the hospital continues to meet the applicable criteria.

(2) *Retention criteria.* To retain referral center status, a hospital must meet the applicable criteria—

(i) In at least 2 of the last 3 years; or

(ii) For the current year.

(3) *Cancellation of referral center status.* If a hospital does not meet either of the retention criterion in paragraph (f)(2) of this section and no longer qualifies for a referral center adjustment, HCFA discontinues the adjustment beginning on the first day of the hospital's next cost reporting period.

* * * * *

4. Section 412.106 is revised to read as follows:

§ 412.106 Special treatment: Hospitals that serve a disproportionate share of low-income patients.

(a) *General considerations.* (1) The factors considered in determining whether a hospital qualifies for a payment adjustment include the number of beds, the number of patient days, and the hospital's location.

(i) The number of beds in a hospital is determined in accordance with § 412.118(b).

(ii) The number of patient days includes only those days attributable to areas of the hospital that are subject to the prospective payment system and excludes all others.

(iii) The hospital's location, in an urban or rural area, is determined in

accordance with the definitions in § 412.62(f).

(2) The payment adjustment is applied to the hospital's total DRG revenues.

(i) A hospital's total DRG revenues are determined on the basis of DRG-adjusted prospective payment rates or, for transition period payments, on the basis of the Federal portion of the hospital's payment rates.

(ii) For purposes of this section, total DRG revenues include outlier payments under Subpart F of this part, but exclude additional payments made under this subpart or under § 412.118 for indirect medical education costs.

(b) *Determination of a hospital's disproportionate patient percentage*—(1) *General rule.*

A hospital's disproportionate patient percentage is determined by adding the results of two computations and expressing that sum as a percentage.

(2) *First computation: Federal fiscal year.* For each month of the Federal fiscal year in which the hospital's cost reporting period begins, HCFA—

(i) Determined the number of covered patient days that—

(A) Are associated with discharges occurring during each month; and

(B) Are furnished to patients who during that month were entitled to both Medicare Part A and SSI, excluding those patients who received only State supplementation;

(ii) Adds the results for the whole period; and

(iii) Divides the number determined under paragraph (b)(2)(ii) of this section by the total number of patient days that—

(A) Are associated with discharges that occur during that period; and

(B) Are furnished to patients entitled to Medicare Part A.

(3) *First computation: Cost reporting period.* If a hospital prefers that HCFA use its cost reporting period instead of the Federal fiscal year, it must furnish its intermediary, in machine-readable format as prescribed by HCFA, data on its Medicare part A patients for its cost reporting period.

(4) *Second computation.* The fiscal intermediary determines, for the hospital's cost reporting period, the number of patient days furnished to patients entitled to Medicaid but not to Medicare part A, and divides that number by the total number of patient days in that same period.

(5) *Disproportionate patient percentage.* The intermediary adds the results of the first computation made under either paragraph (b)(2) or (b)(3) of this section and the second computation made under paragraph (b)(4) of this section and expresses that sum as a percentage. This is the hospital's disproportionate patient percentage, and is used in paragraph (c) of this section.

(c) *Criteria for classification.* A hospital is classified as a "disproportionate share" hospital under any of the following circumstances:

(1) The hospital's disproportionate patient percentage, as determined under paragraph (b)(5) of this section, is at least equal to one of the following:

(i) 15 percent, if the hospital is located in an urban area and has 100 or more beds, or is located in a rural area and has 500 or more beds.

(ii) 40 percent, if the hospital is located in an urban area and has fewer than 100 beds.

(iii) 45 percent, if the hospital is located in a rural area and has fewer than 500 beds.

(2) The hospital is located in an urban area, has 100 or more beds, and can demonstrate that, during its cost reporting period, more than 30 percent of its net inpatient care revenues are derived from State and local government payments for care furnished to indigent patients.

(d) *Payment adjustment*—(1) *Method of adjustment.* If a hospital serves a disproportionate number of low-income patients, its total DRG revenues are increased by an adjustment factor as specified in paragraph (d)(3) of this section.

(2) *Effective dates for payment adjustment.* Payment adjustment under this section is effective for discharges that occur on or after May 1, 1986 (October 1, 1988 for rural hospitals with 500 or more beds) and before October 1, 1995.

(3) *Payment adjustment factors.* (i) If the hospital meets the criteria of paragraph (c)(1)(i) of this section, the payment adjustment factor is 2.5 percent, plus one-half the difference between the hospital's disproportionate patient percentage and 15 percent.

(ii) If the hospital meets the criteria of paragraph (c)(1)(ii) of this section, the payment adjustment factor is 5 percent

(iii) If the hospital meets the criteria of paragraph (c)(1)(iii) of this section, the payment adjustment factor is 4 percent

(iv) If the hospital meets the criteria of paragraph (c)(2) of this section, the payment adjustment factor is 25 percent.

Subpart H—Payments to Hospitals Under the Prospective Payment System

E. Subpart H is amended as follows:

1. In § 412.116, paragraphs (d) and (e) are redesignated as paragraph (e) and (f), respectively, and a new paragraph (d) is added to read as follows:

§ 412.116 Method of payment.

* * * * *

(d) *Special interim payment for unusually long lengths of stay.*—(1) *First interim payment.* A hospital that is not receiving periodic interim payments under paragraph (b) of this section may request an interim payment after a Medicare beneficiary has been in the hospital at least 60 days. Payment for the interim bill is determined as if the bill were a final discharge bill and includes any outlier payment determined as of the last day for which services have been billed.

(2) *Additional interim payments.* A hospital may request additional interim payments at intervals of at least 60 days after the date of the first interim bill submitted under paragraph (d)(1) of this section. Payment for these additional interim bills, as well as the final bill, is determined as if the bill were the final bill with appropriate adjustments made to the payment amount to reflect any previous interim payment made under the provisions of this paragraph (d).

* * * * *

§ 412.118 [Amended]

2. In § 412.118, in paragraphs (c)(1), (c)(2), (d)(1), and (d)(2), the phrase "October 1, 1990" is revised to read "October 1, 1995".

(Catalog of Federal Domestic Assistance Program No. 13.773, Medicare—Hospital Insurance)

Dated: August 15, 1989.

Louis B. Hays,

Acting Administrator, Health Care Financing Administration.

Approved: August 25, 1989.

Louis W. Sullivan,

Secretary.

Editorial Note: The following addendum and appendixes will not appear in the Code of Federal Regulations.

ADDENDUM—SCHEDULE OF STANDARDIZED AMOUNTS EFFECTIVE WITH DISCHARGES ON OR AFTER OCTOBER 1, 1989 AND UPDATE FACTORS AND TARGET RATE PERCENTAGES EFFECTIVE WITH COST REPORTING PERIODS BEGINNING ON OR AFTER OCTOBER 1, 1989

I. Summary and Background

In this addendum, we are making changes in the amounts and factors for determining prospective payment rates for Medicare inpatient hospital services. We are also setting forth new target rate percentages for determining the rate-of-increase limits (target amounts) for hospitals and hospital units excluded from the prospective payment system.

For hospital cost reporting periods beginning on or after October 1, 1989, except for sole community hospitals and hospitals located in Puerto Rico, each hospital's payment per discharge under the prospective payment system will be comprised of 100 percent of the Federal rate. Except for hospitals affected by the regional floor, the Federal rate is based on 100 percent of the national rate.

Sole community hospitals are to be paid on the basis of a rate per discharge composed of 75 percent of the hospital-specific rate and 25 percent of the applicable Federal regional rate (section 1886(d)(5)(C)(ii) of the Act). Hospitals in Puerto Rico are paid on the basis of a rate per discharge composed of 75 percent of a Puerto Rico rate and 25 percent of a national rate (section 1886(d)(9)(A) of the Act). Hospitals affected by the regional floor are paid on the basis of 85 percent of the Federal national rate and 15 percent of the Federal regional rate.

As discussed below in section II, we are making changes in the determination of the prospective payment rates. The changes, to be applied prospectively, will affect the calculation of the Federal rates. Section III sets forth our changes for determining the rate-of-increase limits for hospitals excluded from the prospective payment system. The tables to which we refer in the preamble to the final rule are presented at the end of this addendum in section IV.

II. Changes to Prospective Payment Rates for Hospitals for FY 1990

The basic methodology for determining prospective payment rates is set forth at § 412.63 for hospitals located outside of Puerto Rico. The basic methodology for determining the prospective payment rates for hospitals located in Puerto Rico is set forth at §§ 412.210 and 412.212. Below we discuss the manner in which we are changing some of the factors used for determining the prospective payment rates. The Federal and Puerto Rico rate changes, once issued as final, will be effective with discharges occurring on or after October 1, 1989. As required by section 1886(d)(4)(C) of the Act, we must adjust the DRG classifications and weighting factors for discharges in FY 1990.

In summary, the standardized amounts set forth in Tables 1a, 1b, and 1c of section IV of this addendum were—

- Adjusted to ensure budget neutrality as provided in section 1886(d)(8)(D) of the Act;
- Adjusted by the revised urban and rural outlier offsets; and
- Updated by 5.5 percent (that is, the market basket percentage increase).

A. Calculation of Adjusted Standardized Amounts

1. Standardization of Base-Year Costs or Target Amounts

Section 1886(d)(2)(A) of the Act required the establishment of base-year cost data containing allowable operating costs per discharge of inpatient hospital services for each hospital. The preamble to the interim final rule, published September 1, 1983 (48 FR 39763), contains a detailed explanation of how base-year cost data were established in the initial development of standard amounts for the prospective payment system and how they are used in computing the Federal rates.

Section 1886(d)(9)(B)(i) of the Act required that Medicare target amounts be determined for each hospital located in Puerto Rico for its cost reporting period beginning in FY 1987. The September 1, 1987 final rule contains a detailed explanation of how the target amounts were determined and how they are used in computing the Puerto Rico rates (52 FR 33043, 33066).

The standardized amounts are based on per discharge averages of adjusted hospital costs or, for Puerto Rico, adjusted target amounts, from a base period, updated and otherwise adjusted in accordance with the provisions of section 1886(d) of the Act. Sections 1886 (d)(2)(C) and (d)(9)(B)(ii) of the Act required that the updated base-year per discharge costs and, for Puerto Rico, the updated target amounts, respectively, be standardized in order to remove from the cost data the effects of certain sources of variation in cost among hospitals. These include case mix, differences in area wage levels, cost of living adjustments for Alaska and Hawaii, indirect medical education costs, and payments to hospitals serving a disproportionate share of low-income patients.

Since all adjustments for variation in hospital operating costs or target amounts have already been accounted for consistent with the construction of the standardized amounts, no revision was made at the hospital level for those factors. That is, the adjustments for differences in case mix, wages, cost-of-living, indirect medical education costs, and payments to hospitals serving a disproportionate share of low-income patients reflected in the FY 1990 standardized amounts are identical to those reflected in the current (FY 1989) standardized amounts.

2. Computing Urban and Rural Averages Within Geographic Areas

In determining the prospective payment rates for FY 1984, section 1886(d)(2)(D) of the Act required that the average standardized amounts be determined for hospitals located in urban and rural areas of the nine census divisions and the nation. Under section 1886(d)(9)(B)(iii) of the Act, the average standardized amount per discharge for FY 1988 must be determined for hospitals located in urban and rural areas in Puerto Rico.

For FY 1990, except for hospitals in Puerto Rico and those hospitals that are affected by the regional floor, the Federal rates will be comprised of 100 percent of the national rate (section 1886(d)(1)(A)(iii) of the Act). The Federal rate for hospitals affected by the regional floor is based on 85 percent of the national rate and 15 percent of the regional rate. Section 1886(d)(5)(C)(ii) of the Act specifies that a sole community hospital's Federal rate is based on 100 percent of the regional rate. Hospitals in Puerto Rico are paid a blend of 75 percent of the applicable Puerto Rico standardized amount and 25 percent of a national standardized payment amount.

Section 4002(c)(1) of the Omnibus Budget Reconciliation Act of 1987 (Pub. L. 100-203) amended section 1886(d)(3) of the Act to require the Secretary to compute three average standardized amounts for discharges occurring in a fiscal year beginning on or after October 1, 1987: one for hospitals located in rural areas; one for hospitals located in large urban areas; and one for hospitals located in other urban areas. Section 4002(b) of Pub. L. 100-203 amended section 1886(d)2)(D) of the Act to define a "large urban area" as an urban area with a population of more than 1,000,000. In addition, section 4009(i) of Pub. L. 100-203 provides that a New England County Metropolitan Area (NECMA) with a population of more than 970,000 is classified as a large urban area. As required by section 1886(d)(2)(D) of the Act, population size is determined by the Secretary based on the latest population data published by the Bureau of the Census. Under that section as now amended, urban areas that do not meet the definition of a "large urban area" are referred to as "other urban areas."

Based on 1987 population estimates published by the Bureau of the Census, the current 46 large urban areas continue to meet the criteria to be defined as large urban areas for FY 1990. A list of those areas was set forth in a

notice published on April 5, 1988 at 53 FR 11138. In addition, these areas are identified by an asterisk in Tables 4a and 4c as set forth in section IV of this addendum. No additional areas were identified. Therefore, we are making no change in these areas for purposes of this final rule.

Table 1a contains the three national standardized amounts that would be applicable to most hospitals. Table 1b sets forth the 27 regional standardized amounts that would be applicable to sole community hospitals and to hospitals subject to the regional floor. Under section 1886(d)(9)(A)(ii) of the Act, the national standardized payment amount applicable to hospitals in Puerto Rico consists of the discharge-weighted average of the national rural standardized amount, the national large urban standardized amount, and the national other urban standardized amount (as set forth in Table 1a). The national average standardized amount for Puerto Rico is set forth in Table 1c. This table also includes the three standardized amounts that would be applicable to most hospitals in Puerto Rico.

The methodology for computing the national average standardized amounts is identical to the methodology for determining the regional amounts.

We stated in the addendum to the proposed rule that the Office of Management and Budget (OMB) may announce revised listings of the Metropolitan Statistical Area (MSA) and NECMA designations that are used in calculating the standardized amounts. We noted that if OMB makes the announcement before we issue the final rule, we would list the revised MSA/NECMA designations in the addendum to the final rule. Consistent with Medicare policy and our regulations at § 412.63(b)(4), any changes in designation are effective for discharges occurring on or after October 1, 1989.

Since publication of the proposed rule, OMB has announced a new MSA, Jamestown-Dunkirk, NY, which comprises the county of Chatauqua and has Jamestown and Dunkirk as its central cities. We have incorporated this change in the final wage index set forth in Tables 4a, 4b, and 4c in the addendum to this final rule.

3. Updating the Average Standardized Amounts

In accordance with section 1886(d)(3)(A) of the Act, we are updating the large urban, other urban, and rural average standardized amounts and the hospital-specific rate (which applies only to sole community hospitals) using the applicable percentage increase specified in section 1886(b)(3)(B)(i) of the Act. The percentage increase to be applied is mandated under that section of the law as the estimated percentage increase in the hospital market basket for hospitals located in all areas. The percentage change in the market basket reflects the average change in the price of goods and services purchased by hospitals to furnish inpatient care. The most recent forecasted hospital market basket increase and, thus, the applicable percentage increase for FY 1990 is 5.5 percent.

The 5.8 percent market basket rate of increase set forth in the proposed rule was based on the February 1989 hospital input price forecasts. However, the August 1989 forecasts indicate a decline in the projected FY 1990 hospital market basket index for the February forecasts. The components of the market basket in which the most significant changes have occurred between the two forecasts include pharmaceuticals, which increased by 0.1 percent, and malpractice insurance, which decreased by 0.3 percent. We note that the decrease in the malpractice insurance forecast occurred because the hospital insurance industry is experiencing a deceleration in malpractice insurance premium increases. Malpractice insurance premiums are now forecasted to increase at a lower rate (three to four percent) than in the February forecast. We also note that the forecast for the main component of the hospital market basket, wages and salaries, remained essentially unchanged from the previous forecast.

Although the update factor for FY 1990 is set by law, we were required by section 1886(e)(3)(B) of the Act to report to Congress no later than March 1, 1989 on our initial recommendation of update factors for FY 1990 for both prospective payment hospitals and hospitals excluded from the prospective payment system. For general information purposes, we published this report as appendix B of the proposed rule. Our final recommendation on the update factors (which is required by sections 1886 (e)(4) and (e)(5)(A) of the Act) is set forth as appendix B of this final rule.

Comment: One commenter stated that the hospital market basket does not accurately reflect the true economic expenses incurred by hospitals since nonhospital wages are included in the labor component of the market basket.

Response: The rebased hospital market basket was established in FY 1987, and we have not proposed any changes to the market basket forecasting methodology for FY 1990. The methodology we used to forecast the market basket inflation for FY 1990 is consistent with that outlined in the September 3, 1986 final rule (51 FR 31461). We do not believe it is appropriate to make changes to specific market basket components without also examining all of the other components of the market basket. While changing the proxy measures used in the wage component of the market basket may result in a higher inflation forecast for that component, it is also possible that further analysis of the appropriateness of the forecasting measures used in the other components of the market basket could result in lower forecasts being developed. Therefore, we do not believe it is appropriate to adopt changes to various components of the market basket and that any revisions should be made only in conjunction with a complete rebasing of the market basket. Absent rebasing, we believe it is important that the model we use in developing the market basket forecasts be carried forward over a period of years so that forecasts will be consistent from year to year.

We agree that the issue of appropriate wage proxies warrants further consideration. We are planning to include a rebased hospital market basket as a part of the proposed rule concerning changes in the inpatient hospital prospective payment system for FY 1991. We will consider options for revising the market basket components as part of that process.

4. Other Adjustments to the Average Standardized Amounts

a. *Indirect Medical Education.* Section 1886(d)(3)(C)(ii) of the Act provides that, effective for discharges occurring on or after October 1, 1986, the average standardized amounts be further reduced, taking into consideration the effects of the standardization for indirect medical education costs as described in section II.A.1. of this addendum. The required adjustment is to ensure that the program savings that would be achieved through standardizing for indirect medical education on one basis and computing indirect medical education payments on another basis are preserved.

The first such adjustment was implemented for the standardized amounts effective October 1, 1986. (See the September 3, 1986 final rule (51 FR 31521).) Since section 1886(d)(3)(C)(ii) of the Act, as amended by section 4003(a)(2) of Pub. L. 100-203, required a revision of the adjustment due to the reduction of the adjustment factor for computing indirect medical education payments effective October 1, 1988, we made a further adjustment to the

standardized amounts effective October 1, 1988 to achieve the incremental savings that resulted from that reduction in indirect medical education payments. See the September 30, 1988 final rule (53 FR 38539) for the factors used to make this adjustment. Since there has been no change in the indirect medical education factor for FY 1990, we are not proposing to make any further adjustment to the standardized amounts for FY 1990.

b. *Rural Hospitals Deemed to be Urban.* Section 1886(d)(8)(B) of the Act provides that certain rural hospitals are deemed urban effective with discharges occurring on or after October 1, 1988. Section 1886(d)(8)(C) of the Act, as added by section 8403(a) of the Technical and Miscellaneous Revenue Act of 1988 (Pub. L. 100–647), specifies that if the wage index values applicable to MSAs that are now deemed to include certain rural hospitals and to the rural areas in which those hospitals are actually located were reduced because of the provisions of section 1886(d)(8)(B) of the Act, those wage index values must be recalculated as if that section had not been enacted. A separate wage index value is calculated for each of the affected counties (that is, those rural counties whose hospitals are deemed urban).

Section 1886(d)(8)(D) of the Act specifies two payment conditions that must be met. First, the FY 1990 urban standardized amounts are to be adjusted so as to ensure that total aggregate payments under the prospective payment system after implementation of the provisions of sections 1886(d)(8)(B) and (C) of the Act are equal to the aggregate prospective payments that would have been made absent these provisions. That is, the additional payments to those rural hospitals that have been deemed urban must be financed through a reduction in the urban standardized amounts. Second, the rural standardized amounts are to be adjusted to ensure that aggregate payments to rural hospitals not affected by these provisions neither increase nor decrease as a result of implementation of these provisions. That is, aggregate payments to those rural hospitals that have not been deemed urban should not change as a result of these provisions. The following budget neutrality adjustment factors were applied to the proposed standardized amounts: Urban—.99943; Rural—1.00030.

After further analysis of the effect of payments to rural hospitals as a result of the implementation of section 1886(d)(8)(C) of the Act, we noted inaccuracies in our computation of the proposed budget neutrality adjustment applicable to rural hospitals.

The provisions of section 1886(d)(8)(C) of the Act essentially restore the wage index values for those rural areas negatively impacted by the redesignation of certain rural hospitals previously included in the computation of those areas' rural wage index values. Thus, with implementation of this section, there is no effect on aggregate payments to those rural hospitals. However, hospitals in rural areas that experienced increases in their wage index values when the affected counties were redesignated under section 1886(d)(8)(B) of the Act are allowed to retain those higher values. The net effect of the enactment of sections 1886(d)(8)(B) and (C) of the Act is to increase aggregate payments to rural hospitals over those prior to implementation of these provisions. Therefore, in order to achieve budget neutrality, a decrease in the rural rates would be required to offset the additional payments to rural hospitals whose wage index values have increased. Through an oversight in the methodology used in developing the proposed budget neutrality factor, the rural rates were not adjusted to meet this requirement.

In addition, we incorrectly included rural referral centers not located in redesignated counties with rural hospitals. Since rural referral centers are paid the other urban rate, their payments were reduced by the budget neutrality factor applied to the urban rates. In effect, the methodology we used to calculate the proposed budget neutrality factor applicable to the rural rates would have compensated other rural hospitals for a reduction in payments that they will not incur. Therefore, rural referral centers not located in redesignated counties have been included with urban hospitals for the purpose of the budget neutrality computation. This methodological change has a negligible effect on rural referral centers.

The following adjustment factors were applied to the final standardized amounts: Urban—.99940; Rural—.99925.

c. *Outliers.* Section 1886(d)(5)(A) of the Act requires that, in addition to the basic prospective payment rates, payments must be made for discharges involving day outliers and may be made for cost outliers. Section 1886(d)(3)(B) of the Act correspondingly requires that the urban and rural standardized amounts, respectively, be separately reduced by the proportion of estimated total DRG payments attributable to estimated outlier payments for hospitals located in urban areas and those located in rural areas. Section 1886(d)(9)(B)(iv) of the Act requires that the urban and rural standardized amounts be reduced by the proportion of estimated total payments made to hospitals in Puerto Rico attributable to estimated outlier payments.

Consequently, instead of a uniform reduction factor applying equally to all the standardized amounts, there are two separate reduction factors, one applicable to the urban national and regional standardized amounts and the other applicable to the rural national and regional standardized amounts. Furthermore, sections 1886(d)(5)(A)(iv) and 1886(d)(9)(i) of the Act direct that outlier payments may not be less than five percent nor more than six percent of total payments projected to be made based on the prospective payment rates in any year.

In the September 30, 1988 final rule, we set the outlier thresholds so as to result in estimated outlier payments (prior to consideration of the additional covered days that will result from the elimination of a day limitation on Medicare inpatient hospital services under section 101 of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360)) equal to 5.1 percent of total prospective payments. We also set the same outlier thresholds and offsets for the Puerto Rico prospective payment standardized amounts as we had for hospitals located outside Puerto Rico. Because certain changes we made to the outlier policy were not effective until November 1, 1988, we had two sets of outlier thresholds for FY 1989. For discharges on or after October 1, 1988 and before November 1, 1988, the day outlier threshold is the geometric mean length of stay for each DRG plus the lesser of 22 days or 2.0 standard deviations and the cost outlier threshold is the greater of 2.0 times the prospective payment rate for the DRG or $23,750. For discharges on or after November 1, 1988, the day outlier threshold is the geometric mean length of stay for each DRG plus the lesser of 24 days or 3.0 standard deviations and the cost outlier threshold is the greater of 2.0 times the prospective payment rate for the DRG or $28,000. The outlier adjustments for FY 1989 were .9437 for the urban rates and .9777 for the rural rates.

We proposed to continue to set the outlier thresholds so as to result in estimated outlier payments equal to 5.1 percent of total prospective payments. Therefore, for FY 1990, we proposed to set the day outlier threshold at the geometric mean length of stay for each

DRG plus the lesser of 27 days or 3.0 standard deviations and the cost outlier threshold at the greater of 2.0 times the prospective payment rate for the DRG or $32,000.

The proposed outlier adjustment factors for FY 1990 were as follows: Urban—.943686; Rural—.977956.

In this final rule, we have continued to set the outlier thresholds so as to result in estimated outlier payments equal to 5.1 percent of total prospective payments. Therefore, for FY 1990, the day outlier threshold is the geometric mean length of stay for each DRG plus the lesser of 28 days or 3.0 standard deviations and the cost outlier threshold at the greater of 2.0 times the prospective payment rate for the DRG or $34,000.

The final outlier adjustment factors for FY 1990 are as follows: Outlier Reduction Factors—Urban—.9436; Rural—.9782.

The 5.1 percent projection of outlier payments is based on covered days in the FY 1988 MEDPAR file and does not reflect the increase in outlier payments that will occur in FY 1990 as a result of the elimination of the day limitation on Medicare inpatient hospital services under section 101 of Pub. L. 100–360. Based on FY 1988 data currently available regarding noncovered days of hospital care furnished to Medicare beneficiaries under the benefit structure in effect prior to the effective date of Pub. L. 100–360, we estimate that outlier payment for the additional days of covered care will be about 1.3 percent of total DRG payments. By making an average 5.1 percent offset to the standardized amount in 1990 instead of the 6.4 percent that will actually be paid, we are ensuring that the additional benefits from Pub. L. 100–360 are financed out of additional Federal monies rather than through the updated standardized amounts and outlier funds. For a more detailed explanation of this adjustment made to account for the effect of section 101 of Pub. L. 100–360, see the September 30, 1988 final rule (53 FR 38519). In that rule, we requested comments on the methodology we were using to take the effects of section 101 of Pub. L. 100–360 into account. We are developing a final rule to respond to the comments received from the public; however, we are using the same methodology in FY 1990 as was used to make the adjustment in FY 1989.

Table 8 of section IV of this addendum updates the Statewide average cost-to-charge ratios for urban hospitals and for rural hospitals to be used in calculating cost outlier payments for those hospitals for which the intermediary is unable to compute a reasonable hospital-specific cost-to-charge ratio. Effective October 1, 1989, these Statewide average ratios replace the ratios published in the September 30, 1988 final rule (53 FR 38628). These average ratios will be used to calculate cost outlier payments for those hospitals for which the intermediary computes cost-to-charge ratios lower than 0.36 or greater than 1.23. This range represents 3.0 standard deviations (plus or minus) from the mean of the log distribution of cost-to-charge ratios for all hospitals. These revised parameters will be applied to all updates to hospital-specific cost-to-charge ratios based on cost report settlements occurring during FY 1990.

Comment: Several commenters objected to the current outlier thresholds and the split between cases paid using the cost outlier methodology and cases paid using the day outlier methodology. One commenter urged that we alter our outlier policy to favor cost outliers. Another commenter suggested that we favor day outliers.

Response: As we noted in the September 30, 1988 final rule (53 FR 38504), the 60 percent cost and 40 percent day outlier split results from the methodology used to pay the outlier cases and not on the threshold criteria. The percentage of payments for day outliers under the current outlier policy has increased relative to those under the policy in effect prior to FY 1989 since high cost day outlier cases are now paid using the cost outlier methodology. Further, we believe that the current outlier policy is still relatively new (it was implemented on November 1, 1988), and that more data are needed to analyze its impact. We will analyze these data as we receive them and reexamine our outlier policy if any adverse effects are detected.

The outlier thresholds essentially maintain the current outlier payment split with 34 percent of cases being paid using the cost outlier methodology and 66 percent using the day outlier methodology. We note that 14 percent of total outlier cases would meet the day outlier threshold but would be paid using the cost outlier methodology because it yields the higher payment. Our simulation of FY 1990 outlier payments based on FY 1988 Medicare provider analysis and review file (MEDPAR) data indicates that the percentage of cases that qualify as day outliers is about 80 percent.

The cases qualifying as day outliers are expected to receive 84 percent of outlier payments in FY 1990. An estimated 20 percent of outlier cases would be cost-only outlier cases, which are expected to receive about 16 percent of outlier payments. The following table illustrates this finding in greater detail:

Type of outlier	Percentage of outlier cases	Percentage of outlier payments
Meets day threshold only	56	28.3
Meets day and cost thresholds, paid using day methodology	10	17.9
Meets day and cost thresholds, paid using day methodology	14	37.8
Subtotal—All cases meeting day threshold	80	84
Meets cost threshold only	20	16
Total	100	100

Comment: Several commenters suggested that the size of the outlier payment pool be increased from 5.1 percent to the legal maximum of 6 percent so that the outlier thresholds could be lowered. Other commenters wanted to maintain the 5.1 percent pool. Still other commenters, while in favor of an increase in the outlier pool, suggested that it be done with no corresponding additional offsets to the prospective payment rates.

Response: Increasing the size of the outlier pool to six percent in order to reduce the outlier thresholds would increase the number of outlier cases, but it would also proportionately reduce the basic payment for all cases. In addition, as we have noted in previous prospective payment rules (most recently at 53 FR 38505; September 30, 1988), our research indicates that increasing the outlier pool to six percent would cause only a marginal decrease in the risk faced by hospitals under the prospective payment system. We continue to believe that it is desirable at this time to maintain a smaller outlier pool than the maximum six percent because it allows proportionately greater payment for typical cases.

If we were to increase the outlier pool from 5.1 percent to 6 percent without making a corresponding adjustment to the payment rates, we would be adding program funds to the prospective payment system above and beyond the update factor and, in doing so, would violate the restriction that outlier thresholds be set so as to ensure equality between outlier offsets and projected outlier payment, as required under the current law. Section 1886(d)(3)(B) of the Act mandates that outlier payments be financed out of the total payments made under the prospective payment system. Therefore, any increase in the amount of outlier payments will necessarily reduce funds available for typical cases.

Comment: A few commenters suggested that in fiscal years in which outlier payments have fallen short of the outlier reserve, these undisbursed funds should be paid to the hospitals.

Response: We have responded to similar comments in the September 3, 1986 final rule (52 FR 31525), the September 1, 1987 final rule (52 FR 33048), and the September 30, 1988 final rule (53 FR 38508). We are required by section 1886(d)(5)(A) of the Act to estimate, using the most recent data available, what the level of the outlier thresholds should be in order to yield the proper total amount of outlier payments. We believe we have consistently met our statutory obligation to ensure that the rate offsets used to finance outlier payments were equal to the estimated proportion of total prospective payments for outliers. We have used the most recent Medicare discharge data available to estimate total prospective payments and outlier payments as a percentage thereof. This is necessarily a prospective process and the resulting estimate may be inaccurate based on later data. We do not believe that payment or recoupment of outlier monies based on retrospective adjustments to the thresholds would be appropriate.

Although we overestimated the outlier pool in the first years of the prospective payment system and thus underestimated outlier payments, this has not been the case for the last few years. Based on the most recent billing data, we estimate that in FY 1988 outlier payments represented 6.7 percent of total prospective payment system payments which is 1.7 percent higher than the 5.0 percent outlier pool established for that year. We believe this discrepancy between outlier payments and the outlier pool resulted from the fact that the outlier thresholds established for FY 1988 assumed a 2.7 percent update to the prospective payment rates. However, this update was in effect for only 132 days of FY 1988 and was subsequently revised by the provisions of sections 4002 of Pub. L. 100–203. For FY 1989, we estimate that outlier payments will represent approximately 5.9 percent of total prospective payment system payments and will exceed the outlier pool of 5.1 percent by about 0.8 percent. If we were to make retroactive adjustments for incorrect outlier pool estimates as the commenters suggested, we would now be making reductions in prospective payments.

B. Adjustments for Area Wage Levels and Cost-of-Living

This section contains an explanation of the application of two types of adjustments to the adjusted standardized amounts that will be made by the intermediaries in determining the prospective payment rates as described in section II.D. of this addendum. For discussion purposes, it is necessary to present the adjusted standardized amounts divided into labor and nonlabor portions. Tables 1a, 1b, and 1c, as set forth in this addendum, contain the actual labor-related and nonlabor-related shares that will be used to calculate the prospective payment rates for hospitals located in the 50 States, the District of Columbia, and Puerto Rico.

1. Adjustment for Area Wage Levels

Sections 1886(d)(2)(H) and 1886(d)(9)(C)(iv) of the Act require that an adjustment be made to the labor-related portion of the prospective payment rates to account for area differences in hospital wage levels. This adjustment is made by the intermediaries by multiplying the labor-related portion of the adjusted standardized amounts by the appropriate wage index for the area in which the hospital is located. In section III of the preamble to this final rule, we discuss certain revisions we are making to the wage index. This index is set forth in Tables 4a, 4b, and 4c of this addendum

2. Adjustment for Cost of Living in Alaska and Hawaii

Section 1886(d)(5)(C)(iv) of the Act authorizes an adjustment to take into account the unique circumstances of hospitals in Alaska and Hawaii. Higher labor-related costs for these two States are taken account of in the adjustment for area wages above. For FY 1990, the adjustment necessary for nonlabor-related costs for hospitals in Alaska and Hawaii will be made by the intermediaries by multiplying the nonlabor portion of the standardized amounts by the appropriate adjustment factor contained in the table below.

TABLE OF COST-OF-LIVING ADJUSTMENT FACTORS, ALASKA AND HAWAII HOSPITALS

Alaska—All areas	1.25
Hawaii:	
Oahu	1.225
Kauai	1.175
Maui	1.20
Molokai	1.20
Lanai	1.20
Hawaii	1.15

(The above factors are based on data obtained from the U.S. Office of Personnel Management.)

C. DRG Weighting Factors

As discussed in section II of the preamble to this final rule, we have developed a classification system for all hospital discharges, sorting them into DRGs, and have developed weighting factors for each DRG that are intended to reflect the resource utilization of cases in each DRG relative to that of the average Medicare case.

Table 5 of section IV of this addendum contains the weighting factors that we will use for discharges occurring in FY 1990. These factors have been recalibrated as explained in section II.C. of the preamble to this final rule.

D. Calculation of Prospective Payment Rates for FY 1990

General Formula for Calculation of Prospective Payment Rates for FY 1990

Prospective Payment Rate for all hospitals located outside Puerto Rico except sole community hospitals = Federal Portion

Prospective Payment Rate for Sole Community Hospitals = 75 percent of the hospital-specific portion + 25 percent of Federal portion

Prospective Payment Rate for Puerto Rico Hospitals = 75 percent of the Puerto Rico rate + 25 percent of a discharge-weighted average of the large urban, other urban, and rural national rates

1. Federal Portion

For discharges on or after October 1, 1989 and before October 1, 1990, except for sole community hospitals and hospitals located in Puerto Rico, the hospital's rate is comprised exclusively of the Federal rate. The Federal rate is comprised of 100 percent of the Federal national rate except for those hospitals located in Census regions that have a regional rate that is higher than the national rate. The Federal rate for these hospitals equals 85 percent of the Federal national rate and 15 percent of the Federal regional rate. For discharges occurring on or after October 1, 1989 and before October 1, 1990, rural hospitals in regions I, II, III, and IV and urban and large urban hospitals in regions I, IV, and VI are affected by the regional floor. For sole community hospitals, the 25 percent Federal portion is based entirely on the Federal regional rate. The Federal rates are determined as follows:

Step 1—Select the appropriate regional or national adjusted standardized amount considering the type of hospital and designation of the hospital as large urban, other urban, or rural (see Tables 1a and 1b, section IV of this addendum).

Step 2—Multiply the labor-related portion of the standardized amount by the applicable wage index for the geographic area in which the hospital is located (see Tables 4a, 4b, and 4c, section IV of this addendum).

Step 3—For hospitals in Alaska and Hawaii, multiply the nonlabor-related portion of the standardized amount by the appropriate cost-of-living adjustment factor.

Step 4—Sum the amount from step 2 and the nonlabor portion of the standardized amount (adjusted if appropropriate under step 3).

Step 5—Multiply the final amount from step 4 by the weighting factor corresponding to the appropriate DRG (see Table 5, section IV of this addendum).

Step 6—For sole community hospitals, multiply the result in step 5 by 25 percent. The result is the Federal portion of the FY 1990 prospective payment for a given discharge for a sole community hospital.

2. Hospital-Specific Portion (Applicable Only to Sole Community Hospitals)

The hospital-specific portion of the prospective payment rate is based on a hospital's historical cost experience. For the first cost reporting period under prospective payment, a hospital-specific rate was calculated for each hospital, derived generally from the following formula:

$$\frac{\text{Base year costs per discharge}}{\text{1981 case-mix index}} \times \text{update factor} = \text{Hospital-specific rate}$$

For sole community hospitals, the hospital-specific portion equals 75 percent of the hospital-specific rate for all cost reporting periods beginning on or after October 1, 1983. For each subsequent cost reporting period, the hospital-specific portion is derived as follows:

Hospital-Specific Rate × Update Factor × DRG Weight × .75.

For a more detailed discussion of the hospital-specific portion, we refer the reader to the September 1, 1983 interim final rule (48 FR 39772).

a. *Updating the Hospital-Specific Rates for FY 1990 Cost Reporting Periods.* For cost reporting periods beginning on or after October 1, 1989, we are increasing the hospital-specific rates by 5.5 percent (the market basket percentage increase) for hospitals located in all areas. As required by section 1886(b)(3)(B) of the Act, this is the same percentage increase by which we are increasing the Federal rates for FY 1990.

b. *Calculation of Hospital-Specific Portion.* For sole community hospital cost reporting periods beginning on or after October 1, 1989 and before October 1, 1990, the hospital-specific portion of a hospital's payment for a given discharge is calculated by—

Step 1—Multiplying the hospital's hospital-specific rate for the preceding cost reporting period by the applicable update factor (that is, 5.5 percent);

Step 2—Multiplying the amount resulting from Step 1 by the specific DRG weighting factor applicable to the discharge; and

Step 3—Multiplying the result in step 2 by 75 percent. (The result is the hospital-specific portion of the FY 1990 prospective payment for a given discharge for a sole community hospital. The prospective payment rate is the sum of this amount and the 25 percent Federal portion, which is based entirely on the Federal regional rate.)

3. General Formula for Calculation of Prospective Payment Rates for Hospitals Located in Puerto Rico Beginning On or After October 1, 1989 and Before October 1, 1990

a. *Puerto Rico Rate.* Puerto Rico prospective payment rate is determined as follows:

Step 1—Select the appropriate adjusted average standardized amount considering the large urban, other urban, or rural designation of the hospital (see Table 1c, section IV of the addendum).

Step 2—Multiply the labor-related portion of the standardized amount by the appropriate wage index (see Tables 4a and 4b, section IV of the addendum).

Step 3—Sum the amount from step 2 and the nonlabor portion of the standardized amount.

Step 4—Multiply the result in step 3 by 75 percent.

Step 5—Multiply the amount from step 3 by the weighting factor corresponding to the appropriate DRG weight (see Table 5, section IV of the addendum).

b. *National Rate.* The national prospective payment rate is determined as follows:

Step 1—Multiply the labor-related portion of the national average standardized amount (see Table 1c, section IV of the addendum) by the appropriate wage index.

Step 2—Sum the amount from step 1 and the nonlabor portion of the national average standardized amount.

Step 3—Multiply the result in step 2 by 25 percent.

Step 4—Multiply the amount from step 3 by the weighting factor corresponding to the appropriate DRG weight (see Table 5, section IV of the addendum).

The sum of the Puerto Rico rate and the national rate computed above equals the prospective payment for a given discharge for a hospital located in Puerto Rico.

III. Target Rate Percentages for Hospitals and Hospital Units Excluded From the Prospective Payment System

The inpatient operating costs of hospitals and hospital units excluded from the prospective payment system are subject to rate-of-increase limits established under the authority of section 1886(b) of the Act, which is implemented in § 413.40 of the regulations. Under these limits, an annual target amount (expressed in terms of the inpatient operating cost per discharge) is set for each hospital, based on the hospital's own historical cost experience, trended forward by the applicable update factors. This target amount is applied as a ceiling on the allowable costs per discharge for the hospital's next cost reporting period.

A hospital that has inpatient operating costs per discharge in excess of its target amount would be paid no more than that amount. However, a hospital that has inpatient operating costs less than its target amount would be paid its cost plus the lower of (1) 50 percent of the difference between the inpatient operating cost per discharge and the target amount, or (2) 5 percent of the target amount.

Each hospital's target amount is adjusted annually, before the beginning of its cost reporting period, by an applicable target rate percentage. For cost reporting periods beginning on or after October 1, 1989 and before October 1, 1990, section 1886(b)(3)(B)(ii) of the Act provides that the applicable percentage increase is the market basket percentage increase. In order to determine a hospital's target amount for its cost reporting period beginning in FY 1990, the hospital's target amount for its reporting period that began in FY 1989 is

increased by the market basket percentage for FY 1990. The most recent forecasted hospital market basket increase for FY 1990 is 5.5 percent. Therefore, the applicable percentage increase is also 5.5 percent.

Comment: We received one comment urging us to develop a separate market basket index for rehabilitation facilities.

Response: We agree that the development of a separate market basket for rehabilitation hospitals should be explored further. We are currently working with the National Association of Rehabilitation Facilities to develop data sources for constructing a market basket specific to those facilities. We intend to conduct an indepth analysis of this issue in conjunction with our overall rebasing of the hospital market basket for FY 1991 to determine whether separate market baskets should be established for hospitals and hospital units excluded from the prospective payment system.

IV. Tables

This section contains the tables referred to throughout the preamble to this proposed rule and in this addendum. For purposes of this proposed rule, and to avoid confusion, we have retained the designations of Tables 1 through 5 that were first used in the September 1, 1983 initial prospective payment final rule (48 FR 39844). Tables 1a, 1b, 1c, 3C, 4a, 4b, 4c, 5, 6a, 6b, 6c, 6d, 6e, 6f, 7A, 7B, and 8 are presented below. The tables are as follows:

Table 1a—National Adjusted Standardized Amounts, Labor/Nonlabor
Table 1b—Regional Adjusted Standardized Amounts, Labor/Nonlabor
Table 1c—Adjusted Standardized Amounts for Puerto Rico, Labor/Nonlabor
Table 3C—Hospital Case Mix Indexes for Discharges Occurring in Federal Fiscal Year 1988
Table 4a—Wage Index for Urban Areas
Table 4b—Wage Index for Rural Areas
Table 4c—Wage Index for Rural Counties Whose Hospitals are Deemed Urban
Table 5—List of Diagnoses Related Groups (DRGs), Relative Weighting Factors, Geometric Mean Length of Stay, and Length of Stay Outlier Cutoff Points Used in the Prospective Payment System
Table 6a—New Diagnosis Codes
Table 6b—New Procedure Codes
Table 6c—Revised Procedure Code Titles and Inclusion Terms that Affect DRG Assignment
Table 6d—Expanded Diagnoses Codes That Are No Longer Accepted in GROUPER
Table 6e—Deleted Procedure Codes
Table 6f—Additions to the CC Exclusions List
Table 6g—Deletions To the CC Exclusions List
Table 7A—Medicare Prospective Payment System Selected Percentile Lengths of Stay FY 88 MEDPAR Update 06/89 GROUPER V6.0
Table 7B—Medicare Prospective Payment System Selected Percentile Lengths of Stay FY 88 MEDPAR Update 06/89 GROUPER V7.0
Table 8—Statewide Average Cost-to-Charge Ratios for Urban and Rural Hospitals (Case Weighted)

TABLE 1A.—NATIONAL ADJUSTED STANDARDIZED AMOUNTS, LABOR/NONLABOR

Large Urban		Other Urban		Rural	
Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
2505.03	887.28	2480.65	878.63	2339.06	647.83

TABLE 1B.—REGIONAL ADJUSTED STANDARDIZED AMOUNTS, LABOR/NONLABOR

	Large Urban		Other Urban		Rural	
	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
1. New England (CT, ME, MA, NH, RI, VT)	2630.58	926.19	2604.96	917.16	2592.78	768.52
2. Middle Atlantic (PA, NJ, NY)	2363.35	878.90	2340.33	870.34	2483.11	726.53
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	2522.75	809.79	2498.18	801.90	2373.67	629.99
4. East North Central (IL, IN, MI, OH, WI)	2660.91	958.11	2635.00	948.78	2403.67	700.19
5. East South Central (AL, KY, MS, TN)	2421.18	733.25	2397.60	726.11	2352.54	587.47
6. West North Central (IA, KS, MN, MO, NB, ND, SD)	2523.45	873.01	2498.88	864.51	2286.58	627.63
7. West South Central (AR, LA, OK, TX)	2508.92	804.31	2484.49	796.47	2192.92	577.20
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	2419.44	862.26	2395.88	853.87	2229.43	668.21
9. Pacific (AK, CA, HI, OR, WA)	2354.23	984.11	2331.30	974.52	2156.83	747.88

TABLE 1C.—ADJUSTED STANDARDIZED AMOUNTS FOR PUERTO RICO, LABOR/NONLABOR

	Large Urban		Other Urban		Rural	
	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
Puerto Rico	2225.10	398.08	2203.46	394.19	1563.45	289.41
National	2454.17	823.55				

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TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 1 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
010001	01.3323	010059	00.9487	010121	01.1169	030003	01.2704	030072	00.8331
010004	00.9950	010060	00.9816	010122	00.9712	030004	00.9037	030073	01.1578
010005	01.2027	010061	01.0002	010123	01.2478	030006	01.3852	030074	00.9466
010006	01.2029	010062	01.0249	010124	01.2483	030007	01.1920	030075	00.8694
010007	00.9665	010064	01.4782	010125	01.0647	030008	01.6144	030076	00.8608
010008	00.9981	010065	01.1163	010126	01.0286	030009	01.2465	030077	00.9068
010009	01.0968	010066	00.8811	010127	01.3304	030010	01.3638	030078	01.0305
010010	00.9472	010067	00.8548	010128	00.9550	030011	01.2561	030079	00.7869
010011	01.3067	010068	01.1429	010129	01.0173	030012	01.1499	030080	01.4609
010012	01.2941	010069	01.1148	010130	01.0799	030013	01.1675	030081	01.0101
010015	01.1440	010070	01.2452	010131	01.2956	030014	01.3308	030082	01.0429
010016	01.1381	010072	01.1122	010134	00.8999	030016	01.1547	030083	01.2082
010018	00.9354	010073	01.0224	010136	01.0222	030017	01.2642	030084	01.0401
010019	01.1179	010074	01.0678	010137	01.2616	030018	01.4289	030085	01.0853
010020	01.0774	010075	01.1002	010138	00.9836	030019	01.1468	030086	01.1655
010021	01.2682	010078	01.2298	010139	01.4340	030020	01.3550	030087	01.2580
010022	00.9900	010079	01.1617	010142	00.9163	030022	01.3105	030088	01.2418
010023	01.2103	010080	00.9319	010143	01.1192	030023	01.1931	030089	01.1867
010024	01.2850	010081	01.5270	010144	01.2137	030024	01.4137	030091	01.0034
010025	01.2184	010083	01.0309	010145	01.2502	030025	01.2559	030092	01.2154
010026	00.9205	010084	01.3202	010146	01.1272	030027	01.0454	030093	01.2969
010027	01.0227	010085	01.2900	010148	00.9764	030030	01.5223	040001	01.0658
010028	01.0693	010086	01.0433	010149	01.3305	030033	01.2807	040002	01.0568
010029	01.3459	010087	01.2980	010150	01.0084	030034	01.2289	040003	00.9788
010030	01.0154	010089	01.0266	010152	01.2252	030035	01.1515	040004	01.2534
010031	01.2219	010090	01.3369	010153	00.8755	030036	01.1710	040005	01.0732
010032	00.9136	010091	01.0691	020001	01.4165	030037	01.6439	040006	00.9873
010033	01.6912	010092	01.3239	020002	01.1255	030038	01.4410	040007	01.4103
010034	01.1207	010094	01.1733	020004	01.0266	030040	01.0100	040008	01.0481
010035	01.1346	010095	00.9791	020005	00.8443	030041	00.9199	040010	01.1605
010036	01.0855	010096	00.9393	020006	01.1086	030043	01.0353	040011	00.8855
010038	01.0836	010097	01.0640	020007	00.8032	030044	01.0714	040013	00.9818
010039	01.5540	010098	01.0919	020008	01.0057	030046	01.0241	040014	01.1547
010040	01.2011	010099	00.9978	020009	00.8053	030047	00.9949	040015	01.2037
010041	00.7688	010100	01.1851	020010	00.8651	030049	01.0155	040016	01.3656
010043	00.9754	010101	01.0949	020011	00.9442	030051	01.2005	040017	01.2014
010044	00.9591	010102	00.9106	020012	01.3460	030054	00.9302	040018	01.1116
010045	01.0499	010103	01.4882	020013	00.9616	030055	01.1130	040019	01.2344
010046	01.2305	010104	01.5130	020014	01.0133	030057	01.2363	040020	01.3728
010047	00.9099	010108	01.1613	020017	01.2517	030059	01.4239	040021	01.0304
010049	01.0494	010109	01.0118	020018	00.9737	030060	01.2124	040022	01.4868
010050	00.9496	010110	00.8958	020019	00.9448	030061	01.3325	040024	00.9534
010051	00.9060	010112	01.0857	020020	00.9096	030062	01.2465	040025	00.9466
010052	01.0256	010113	01.3594	020021	00.8813	030063	01.1479	040026	01.2818
010053	00.9664	010114	01.2432	020024	01.0042	030064	01.4152	040027	01.1728
010054	01.1528	010115	00.9556	020025	00.9763	030065	01.3409	040028	01.0402
010055	01.2482	010117	00.9720	020026	01.3079	030067	01.0160	040029	01.1021
010056	01.1818	010118	01.1612	020027	00.9558	030068	01.0702	040030	00.9560
010057	01.1238	010119	01.1722	030001	01.2345	030069	01.1806	040031	00.9606
010058	01.0439	010120	00.9866	030002	01.4918	030071	00.9573	040032	00.9892

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 2 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
040033	00.8320	040109	01.1715	050053	01.2667	050112	01.3611	050174	01.5085
040035	00.9659	040114	01.6633	050054	01.2050	050113	01.1816	050175	01.2407
040036	01.1931	040115	01.0539	050055	01.1775	050114	01.4370	050177	01.3390
040037	01.0256	040116	01.2860	050056	01.2183	050115	01.3957	050179	01.2359
040039	00.9707	040118	01.0794	050057	01.3002	050116	01.3887	050180	01.4013
040040	00.9566	040119	01.1330	050058	01.3415	050117	01.2485	050181	01.2994
040041	01.1646	040122	01.0917	050060	01.3375	050118	01.1957	050183	01.2308
040042	01.2529	040123	00.9324	050061	01.2148	050121	01.1545	050186	01.3316
040043	01.1359	040124	01.1237	050063	01.3475	050122	01.4456	050187	00.8493
040044	00.8989	040126	00.9591	050065	01.4082	050124	01.2544	050188	01.3599
040045	00.9935	040130	01.0407	050066	01.2220	050125	01.2117	050189	00.9819
040047	00.9991	040131	00.9356	050067	01.1936	050126	01.2724	050190	01.0776
040048	01.1068	050002	01.1776	050068	01.1379	050127	01.2327	050191	01.3909
040050	01.0814	050004	01.1621	050069	01.4281	050128	01.4218	050192	01.0402
040051	00.9551	050006	01.2805	050070	01.2173	050129	01.4913	050193	01.3601
040053	01.0292	050007	01.3889	050071	01.1713	050131	01.2613	050194	01.2582
040054	01.0842	050008	01.4204	050072	01.2311	050132	01.2139	050195	01.3237
040055	01.2690	050009	01.4131	050073	01.1822	050133	01.1724	050196	01.2372
040058	00.9403	050011	01.1089	050074	00.9901	050134	01.1953	050197	01.7021
040060	01.0255	050013	02.1054	050075	01.2112	050135	01.4505	050199	01.2073
040062	01.1716	050014	01.1139	050076	01.4465	050136	01.2158	050201	01.1302
040063	01.3196	050015	01.2796	050077	01.4250	050137	01.1724	050202	01.2521
040064	00.9950	050016	01.1361	050078	01.1858	050138	01.4734	050204	01.3816
040066	00.9439	050017	01.6417	050079	01.3671	050139	01.2123	050205	01.1552
040067	01.0079	050018	01.2035	050080	01.1961	050140	01.2120	050207	01.1730
040069	01.0313	050019	00.9333	050081	01.5075	050141	01.0951	050208	01.2112
040070	00.8963	050021	01.2466	050082	01.3328	050143	01.2402	050211	01.2672
040071	01.2298	050022	01.3733	050084	01.4191	050144	01.3536	050212	01.0680
040072	01.0790	050024	01.2360	050086	01.0974	050145	01.2184	050213	01.2401
040074	01.1025	050025	01.5264	050087	01.3770	050146	01.3138	050214	01.3467
040075	01.1303	050026	01.5395	050088	01.0238	050147	00.7311	050215	01.4169
040076	00.9550	050028	01.2169	050089	01.3133	050148	01.1158	050217	01.1309
040077	00.9430	050029	01.2380	050090	01.2518	050149	01.2074	050219	01.4075
040078	01.1990	050030	01.2198	050091	01.1467	050150	01.2319	050220	01.2704
040080	01.0379	050032	01.1496	050092	01.1207	050151	01.1974	050221	01.4419
040081	00.9393	050033	01.3292	050093	01.4737	050152	01.3162	050222	01.3179
040082	01.1100	050034	01.2101	050095	01.0860	050153	01.5095	050224	01.3899
040084	01.0485	050036	01.5081	050096	01.1578	050154	01.2789	050225	01.2465
040085	01.0839	050038	01.2358	050097	01.2757	050155	01.2010	050226	01.4238
040088	01.1150	050039	01.5030	050099	01.3823	050158	01.4183	050228	01.2762
040090	00.9635	050040	01.1392	050100	01.6447	050159	01.2560	050229	01.2674
040091	01.1012	050041	01.1636	050101	01.3418	050161	01.6589	050230	01.3148
040093	00.9821	050042	01.2183	050102	01.2789	050164	01.3748	050231	01.4466
040095	00.9836	050043	01.5241	050103	01.4707	050166	01.2522	050232	01.6377
040098	01.1448	050045	01.1593	050104	01.3281	050167	01.3309	050233	01.2011
040100	01.0919	050046	01.2102	050107	01.3261	050168	01.5003	050234	01.2492
040105	01.0293	050047	01.5210	050108	01.3474	050169	01.3919	050235	01.3653
040106	01.0299	050049	01.2847	050109	01.9286	050170	01.3612	050236	01.2371
040107	01.0517	050051	01.2033	050110	01.1024	050172	01.2056	050238	01.3057
040108	00.9163	050052	01.0887	050111	01.2126	050173	01.3680	050239	01.3413

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
050240	01.3202	050312	01.5705	050390	01.2672	050459	01.2627	050549	01.5589
050241	01.1589	050313	01.1354	050391	01.2083	050464	01.8591	050550	01.2948
050242	01.3376	050315	01.3660	050392	00.9536	050467	01.2440	050551	01.3315
050243	01.2716	050317	01.2180	050393	01.3994	050468	01.3703	050552	01.1358
050245	01.5305	050319	01.2822	050394	01.3550	050469	01.0002	050557	01.2629
050248	01.1409	050320	01.1880	050395	01.1764	050470	01.1106	050559	01.3571
050251	01.0904	050324	01.6757	050396	01.4074	050471	01.6345	050560	01.1554
050253	01.1636	050325	01.2480	050397	01.0896	050473	01.2555	050561	01.0857
050254	01.1349	050326	01.3226	050401	01.2496	050476	01.2700	050564	01.1760
050256	01.5249	050327	01.5281	050404	01.1114	050477	01.2198	050565	01.1895
050257	01.3900	050328	01.2604	050406	00.9931	050478	01.1014	050566	01.0233
050258	01.3555	050329	01.2649	050407	01.1889	050481	01.3763	050567	01.4045
050260	01.0264	050331	01.2935	050410	01.0763	050482	00.9946	050568	01.2793
050261	01.1534	050333	01.0614	050411	01.2518	050483	01.3871	050569	01.2311
050262	01.5046	050334	01.3374	050413	01.2645	050485	01.5009	050570	01.5418
050263	01.2880	050335	01.2084	050414	01.2364	050486	01.5445	050571	01.3946
050264	01.3297	050336	01.3042	050417	01.1824	050488	01.2218	050573	01.4029
050267	01.4365	050337	01.1419	050418	01.1499	050489	01.1813	050575	01.0758
050268	01.2128	050342	01.2927	050419	01.1236	050491	01.8113	050577	01.2635
050269	01.2008	050343	01.1000	050420	01.3588	050492	01.2859	050578	01.1792
050270	01.3023	050345	01.3190	050421	01.2591	050494	01.1497	050579	01.3711
050272	01.1716	050348	01.3231	050423	01.0788	050496	01.6004	050580	01.1685
050273	00.5383	050349	01.0648	050424	01.5802	050497	00.9653	050581	01.3241
050274	00.9668	050350	01.3383	050425	01.1837	050498	01.1855	050583	01.7626
050276	01.0592	050351	01.4674	050426	01.2516	050502	01.6883	050584	01.2916
050277	01.2897	050352	01.2560	050427	00.9654	050503	01.4061	050585	01.2555
050278	01.3571	050353	01.5929	050430	00.9336	050506	01.2844	050586	01.2565
050279	01.1661	050355	00.8626	050431	01.1358	050510	01.2189	050587	01.2338
050280	01.2476	050357	01.6695	050432	01.3550	050512	01.1563	050588	01.2000
050281	01.2653	050359	01.0590	050433	01.0408	050515	01.2995	050589	01.3903
050282	01.2085	050360	01.2458	050434	01.1195	050516	01.3468	050590	01.3097
050283	01.2999	050362	00.8809	050435	01.1210	050517	01.1700	050591	01.2169
050286	01.0267	050363	01.2572	050436	01.0664	050522	01.3286	050592	01.2807
050289	01.6235	050366	01.1786	050438	01.3959	050523	01.1061	050593	01.2336
050290	01.3796	050367	01.2271	050440	01.1207	050526	01.2280	050594	01.9675
050291	01.1535	050369	01.2694	050441	01.6051	050527	01.3061	050597	01.2060
050292	01.1568	050371	00.9115	050442	01.1915	050528	01.1636	050598	01.2535
050293	00.9616	050372	01.0993	050443	00.9151	050530	01.2270	050599	01.3897
050295	01.3257	050373	01.1240	050444	01.1932	050531	01.1301	050601	01.1702
050296	01.1438	050376	01.2832	050446	00.8684	050534	01.3056	050603	01.3977
050298	01.1764	050377	01.0249	050447	01.3334	050535	01.3673	050604	01.3144
050299	01.2985	050378	01.1356	050448	01.0276	050537	01.1842	050605	00.6935
050300	01.2769	050379	01.0526	050449	01.2472	050539	01.2338	050607	01.1649
050301	01.2664	050380	01.5331	050450	01.1238	050541	01.4234	050608	01.1540
050302	01.2239	050381	01.0564	050451	01.0223	050542	01.1133	050609	01.2445
050305	01.3562	050382	01.3035	050454	01.6454	050543	01.2705	050613	01.0349
050307	01.3439	050383	01.3060	050455	01.5289	050544	01.2536	050615	01.2331
050308	01.4972	050385	01.2393	050456	01.3371	050545	00.8263	050616	01.1646
050309	01.2798	050387	00.9814	050457	01.4931	050546	01.0182	050618	01.1683
050310	01.1231	050388	00.8678	050458	01.1370	050547	00.8851	050619	01.3171

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 4 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
050622	01.2039	060016	01.1405	060074	00.9814	070036	01.2875	100034	01.3796
050623	01.2593	060017	01.2663	060075	01.2020	080001	01.4167	100035	01.3137
050624	01.1636	060018	01.1005	060076	01.3171	080002	01.1621	100036	01.2926
050625	01.3732	060019	01.5768	060077	01.1313	080003	01.2409	100038	01.4751
050630	01.0698	060020	01.3971	060083	00.6641	080004	01.2112	100039	01.3690
050633	01.2121	060022	01.4887	060085	00.9996	080005	01.1285	100040	01.4422
050635	01.3172	060023	01.3197	060087	01.2402	080006	01.1417	100042	01.2027
050636	01.2470	060024	01.4661	060088	01.1281	080007	01.1623	100043	01.2608
050637	01.2542	060026	01.3739	060090	00.9943	090001	01.3475	100044	01.2920
050638	00.9128	060027	01.2248	060092	00.7056	090002	01.1424	100045	01.2845
050641	01.0489	060028	01.3560	060093	01.0628	090003	01.3856	100046	01.2418
050643	00.9224	060029	00.9838	060096	01.0669	090004	01.4704	100047	01.1914
050644	01.2566	060030	01.2319	060098	01.2286	090005	01.2595	100048	00.9625
050649	01.2976	060031	01.3805	060099	00.9974	090006	01.2390	100049	01.2867
050650	01.2432	060032	01.3356	060100	01.0883	090007	01.1040	100050	01.1072
050651	01.2548	060033	01.2009	060101	01.5103	090008	01.2189	100051	01.1543
050655	01.1354	060034	01.2374	070001	01.7319	090009	01.2033	100052	01.2479
050660	01.1302	060035	01.2236	070002	01.5746	090010	01.0127	100053	01.1222
050661	00.9277	060036	01.1387	070003	01.2008	090011	01.5682	100054	01.3627
050662	00.8358	060037	01.0182	070004	01.2247	100001	01.3081	100055	01.2602
050663	01.2305	060038	01.1751	070005	01.2908	100002	01.3529	100056	01.2719
050666	00.9763	060039	01.1178	070006	01.2351	100004	01.1037	100057	01.2531
050667	01.2022	060041	01.0042	070007	01.2556	100005	01.0268	100059	01.4902
050668	01.2687	060042	00.9410	070008	01.1477	100006	01.4398	100060	01.4978
050669	00.9473	060043	01.0353	070009	01.2556	100007	01.7469	100061	01.3168
050670	00.8219	060044	01.1843	070010	01.4327	100008	01.5556	100062	01.3162
050671	00.9506	060045	01.0147	070011	01.2703	100009	01.3546	100063	01.2653
050672	00.6719	060046	01.1166	070012	01.2015	100010	01.2835	100065	01.0732
050674	01.1615	060047	01.0551	070013	01.2353	100011	00.9283	100067	01.3068
050675	01.2284	060049	01.1052	070014	01.1263	100012	01.3405	100068	01.2261
050676	00.9595	060050	01.1550	070015	01.2552	100013	00.7921	100069	01.3026
050677	01.2103	060051	01.3318	070016	01.2666	100014	01.1470	100070	01.3341
050678	01.1890	060052	00.9367	070017	01.3511	100015	01.2539	100071	01.2785
050679	01.1342	060053	00.8630	070018	01.1637	100016	01.0029	100072	01.1712
050680	01.1308	060054	01.2174	070019	01.1997	100017	01.3505	100073	01.5936
050681	00.8187	060056	00.9159	070020	01.3604	100018	01.3391	100074	01.2238
060001	01.3818	060057	01.3100	070021	01.2239	100019	01.4188	100075	01.5735
060003	01.1873	060058	00.8522	070022	01.6355	100020	01.2500	100076	01.2323
060004	01.0924	060060	01.0320	070023	01.2006	100021	01.2203	100077	01.2384
060005	01.4978	060062	00.9602	070024	01.1766	100022	01.4570	100078	01.1762
060006	01.1427	060063	01.1085	070025	01.5334	100023	01.3249	100079	01.2304
060007	01.1620	060064	01.2970	070026	01.2631	100024	01.1615	100080	01.4212
060008	01.1729	060065	01.2267	070027	01.2848	100025	01.4592	100081	01.1194
060009	01.2728	060066	01.0242	070028	01.3755	100026	01.3692	100082	01.3717
060010	01.5160	060067	01.0008	070029	01.2852	100027	00.9261	100083	01.1813
060011	01.1930	060068	01.1922	070030	01.1871	100028	01.2216	100084	01.3215
060012	01.3814	060070	01.1793	070031	01.2584	100029	01.2659	100085	01.1913
060013	01.2418	060071	01.2041	070033	01.1819	100030	01.0543	100086	01.2335
060014	01.4544	060072	00.9641	070034	01.2484	100032	01.3129	100087	01.6093
060015	01.3360	060073	00.8913	070035	01.2778	100033	01.3391	100088	01.3112

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
100089	01.2439	100156	01.0944	100223	01.3460	110005	01.1732	110064	01.2078
100090	01.1896	100157	01.3857	100224	01.1711	110006	01.2111	110065	01.0960
100092	01.1733	100159	01.0178	100225	01.2321	110007	01.3954	110066	01.2316
100093	01.3042	100160	01.1457	100226	01.1986	110008	01.1121	110069	01.1053
100098	01.0037	100161	01.3286	100227	01.0166	110009	01.0712	110070	00.9464
100099	01.2204	100162	01.2517	100228	01.1859	110010	01.8228	110071	00.9615
100100	01.1461	100164	00.9849	100229	01.3845	110011	01.1335	110072	00.9561
100102	01.1519	100165	00.9450	100230	01.2001	110013	01.0559	110073	01.0337
100103	00.9794	100166	01.3317	100231	01.4925	110014	01.1320	110074	01.2220
100105	01.2324	100167	01.2741	100232	01.1499	110015	01.0518	110075	01.1637
100106	01.1244	100168	01.2930	100234	01.2961	110016	01.1883	110076	01.2738
100107	01.2240	100169	01.5782	100235	01.2867	110017	00.9315	110077	01.0044
100108	01.0484	100170	01.1995	100236	01.3131	110018	01.1184	110078	01.4402
100109	01.2134	100172	01.2472	100237	01.7622	110020	01.1538	110079	01.0813
100110	01.3730	100173	01.2385	100238	01.3587	110023	01.1261	110080	01.1207
100112	00.9891	100174	01.4601	100239	01.3820	110024	01.2554	110081	01.0295
100113	01.5920	100175	01.1159	100240	00.7356	110025	01.2102	110082	01.7406
100114	01.2705	100176	01.7406	100241	00.9674	110026	01.0975	110083	01.2816
100115	01.2038	100177	01.3244	100242	01.2099	110027	01.0260	110085	01.1082
100117	01.1613	100179	01.4842	100243	01.2818	110028	01.3476	110086	01.1476
100118	01.1380	100180	01.3986	100244	01.2665	110029	01.2086	110087	01.1889
100120	01.2392	100181	01.1260	100246	01.2416	110030	01.1779	110088	00.8405
100121	01.1391	100183	01.2472	100248	01.4695	110031	01.1156	110089	01.1224
100122	01.3256	100185	01.0834	100249	01.2495	110032	01.1496	110091	01.2271
100124	01.3182	100186	01.3342	100252	01.2221	110033	01.2283	110092	01.1214
100125	01.1170	100187	01.2626	100253	01.2101	110034	01.2584	110093	01.0373
100126	01.3190	100189	01.2374	100254	01.2383	110035	01.1863	110094	01.0021
100127	01.4047	100191	01.2512	100255	01.2815	110036	01.5010	110095	01.2340
100128	02.1617	100194	01.2502	100256	01.3105	110037	01.1423	110096	01.0874
100129	01.2448	100195	01.2166	100258	01.4676	110038	01.1976	110097	01.0672
100130	01.2279	100196	01.2432	100259	01.2021	110039	01.1862	110098	00.9585
100131	01.2374	100199	01.2923	100260	01.2029	110040	00.9308	110099	00.8753
100132	01.3200	100200	01.2576	100262	01.2740	110041	01.1520	110100	01.0797
100134	00.9980	100203	01.2147	100263	01.2512	110042	01.0275	110101	00.9882
100135	01.4539	100204	01.4530	100264	01.3137	110043	01.4242	110103	00.9287
100137	01.1887	100206	01.2493	100265	01.2057	110044	01.0848	110104	01.0751
100138	00.9750	100207	01.3008	100266	01.1590	110045	01.0337	110105	01.1152
100139	01.1820	100208	01.3680	100267	01.2993	110046	01.1974	110107	01.4814
100140	01.1074	100209	01.3296	100268	01.2541	110048	01.1226	110108	00.9165
100142	01.0621	100210	01.3821	100269	01.2338	110049	00.9978	110109	00.9809
100143	01.0878	100211	01.2647	100270	00.8878	110050	01.0291	110111	00.9862
100144	01.0567	100212	01.3431	100271	01.4304	110051	00.9425	110112	00.9587
100145	01.2209	100213	01.3531	100273	01.0613	110052	00.8839	110113	00.9734
100146	01.0778	100214	01.3612	100275	01.1831	110054	01.1561	110114	01.0637
100147	01.0816	100217	01.1275	100276	01.2629	110055	00.9327	110115	01.8655
100149	01.1969	100218	01.0052	100277	01.0925	110056	00.9175	110117	01.0048
100150	01.2322	100219	01.3094	110001	01.1374	110059	01.1303	110118	00.9332
100151	01.6278	100220	01.6395	110002	01.2156	110061	00.9585	110120	01.0583
100152	01.1647	100221	01.6737	110003	01.1628	110062	00.9536	110121	00.9764
100154	01.3412	100222	01.2097	110004	01.2499	110063	01.0487	110122	01.1853

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 6 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
110123	00.8745	110187	01.0233	130017	00.9754	140027	01.1092	140087	01.2897
110124	01.0393	110188	01.2568	130018	01.3787	140029	01.2832	140088	01.5152
110125	01.0999	110189	01.0161	130019	01.1779	140030	01.3906	140089	01.1496
110127	00.9806	110190	01.0129	130021	01.0496	140031	01.0089	140090	01.2504
110128	01.1808	110191	01.2181	130022	01.2045	140032	01.1313	140091	01.3312
110129	01.3635	110192	01.2943	130024	01.1797	140033	01.2334	140093	01.1268
110130	01.0226	110193	01.0688	130025	00.9421	140034	01.1257	140094	01.2148
110131	00.9912	110194	00.9779	130026	01.1153	140035	01.0939	140095	01.3271
110132	01.1240	110195	01.0813	130027	00.9102	140036	01.0600	140097	01.0384
110133	00.9595	110196	01.7760	130028	01.1908	140037	01.0635	140098	01.2374
110134	00.8827	110198	01.2093	130029	01.0941	140038	01.0574	140099	01.1658
110135	01.0693	110200	01.4930	130030	00.9289	140039	01.0218	140100	01.2988
110136	01.1520	110201	01.2007	130031	01.0850	140040	01.1966	140101	01.1206
110140	00.9177	110202	01.0971	130034	00.9419	140041	01.0774	140102	01.0333
110141	00.9055	110203	00.9245	130035	01.0200	140042	01.0201	140103	01.1318
110142	01.1410	120001	01.5139	130036	01.1239	140043	01.1459	140104	01.1219
110143	01.2268	120002	01.0688	130037	01.2699	140045	01.0284	140105	01.2377
110144	01.2089	120003	01.0359	130038	00.9141	140046	01.1760	140107	00.9407
110146	00.8978	120004	01.2497	130039	01.1704	140047	01.0717	140108	01.1796
110149	01.0617	120005	01.1064	130040	01.0435	140048	01.1362	140109	00.9982
110150	01.1385	120006	01.1524	130043	01.0553	140049	01.2649	140110	01.1909
110151	01.0673	120007	01.5483	130044	00.9923	140051	01.1652	140112	01.1140
110152	00.9400	120008	01.0258	130045	00.9332	140052	01.1962	140113	01.4154
110153	01.0090	120009	00.9398	130048	00.9655	140053	01.5275	140114	01.1634
110154	01.0013	120010	01.4299	130049	01.2546	140054	01.3123	140115	01.1161
110155	01.0030	120011	01.2936	130050	00.8292	140055	01.0316	140116	01.2436
110156	00.9295	120012	01.0193	130051	01.0348	140058	01.0919	140117	01.1888
110157	01.1218	120014	01.1533	130054	00.8680	140059	01.0570	140118	01.3837
110161	01.2386	120015	00.7445	130056	00.9445	140061	01.1326	140119	01.4677
110162	00.8419	120016	01.0369	140001	01.2619	140062	01.2366	140120	01.1572
110163	01.2471	120018	00.8889	140002	01.2172	140063	01.2274	140121	00.9916
110164	01.2923	120019	01.0576	140003	00.9700	140064	01.2057	140122	01.2372
110165	01.1484	120021	00.8066	140004	01.0438	140065	01.2450	140123	01.1768
110166	01.2733	120022	01.4404	140005	00.8700	140066	01.1762	140124	01.1655
110168	01.3265	120024	00.9279	140007	01.1638	140067	01.5003	140125	01.2039
110169	00.7007	130001	00.9894	140008	01.2520	140068	01.2388	140126	01.4429
110170	00.8625	130002	01.3457	140010	01.3290	140069	01.0033	140127	01.1387
110171	01.1997	130003	01.2452	140011	01.0415	140070	01.3295	140128	01.0037
110172	01.0970	130005	01.2783	140012	01.2528	140072	01.1431	140129	01.0456
110174	00.9878	130006	01.5777	140013	01.2947	140074	01.0552	140130	01.1386
110175	00.9733	130007	01.3880	140014	00.9629	140075	01.2679	140132	01.3266
110176	01.1061	130008	00.8477	140015	01.1706	140077	01.0028	140133	01.2773
110177	01.3598	130009	01.0276	140016	00.9750	140079	01.2017	140134	00.7201
110178	01.0517	130010	01.0029	140017	01.2783	140080	01.5753	140135	01.1716
110179	01.1432	130011	01.3069	140018	01.3234	140081	01.0725	140136	01.1604
110181	01.0276	130012	00.9885	140019	00.9343	140082	01.2008	140137	01.0093
110183	01.1131	130013	01.1866	140023	01.1502	140083	01.1541	140138	01.1553
110184	01.1043	130014	01.2652	140024	00.9592	140084	01.2090	140139	01.0701
110185	01.0876	130015	01.0356	140025	01.0834	140085	01.1476	140140	01.0423
110186	01.0973	130016	00.9315	140026	01.1246	140086	01.0875	140141	01.0130

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
140142	01.0802	140205	01.0514	140289	01.2813	150045	01.1115	150100	01.4401
140143	01.0918	140206	01.1136	140290	01.2406	150046	01.3000	150101	01.0568
140144	01.0673	140207	01.2694	140291	01.2068	150047	01.4407	150102	01.0228
140145	01.1338	140208	01.3550	140292	01.2086	150048	01.2009	150103	00.9702
140146	00.9707	140209	01.3590	140293	00.9544	150049	01.0371	150104	01.1051
140147	01.0433	140210	00.9900	140294	01.0770	150050	01.1488	150105	01.1199
140148	01.4121	140211	01.1115	140295	01.1845	150051	01.2389	150106	01.0041
140150	01.2948	140212	01.1173	140297	01.3566	150052	01.0681	150109	01.2781
140151	01.0141	140213	01.1976	140298	01.5425	150053	00.9896	150110	00.9234
140152	01.0630	140215	01.1436	140299	01.0504	150054	01.0629	150111	01.0895
140154	01.1661	140217	01.2758	150001	01.1416	150056	01.5471	150112	01.1270
140155	01.1605	140218	01.0193	150002	01.2113	150057	02.2538	150113	01.1644
140156	01.2705	140219	01.2290	150003	01.4579	150058	01.3688	150114	01.0195
140158	01.2424	140220	01.0665	150004	01.2250	150059	01.0951	150115	01.2071
140159	01.2075	140223	01.3670	150005	01.2054	150060	01.1439	150122	01.0914
140160	01.2541	140224	01.2897	150006	01.1954	150061	01.1804	150123	00.9859
140161	00.9858	140226	00.8907	150007	01.1567	150062	00.9987	150124	01.1465
140162	01.1582	140228	01.5444	150008	01.2566	150063	01.1600	150125	01.2780
140164	01.2299	140229	01.0605	150009	01.2299	150064	01.0574	150126	01.6379
140165	01.0385	140230	00.9730	150010	01.0770	150065	01.1173	150127	01.1784
140166	01.1486	140231	01.2704	150011	01.2175	150066	01.1019	150128	01.1321
140167	01.1462	140232	01.0175	150012	01.4152	150067	00.9460	150129	01.1848
140168	01.0538	140233	01.4068	150013	01.0232	150069	01.2039	150130	01.1750
140170	01.0214	140234	01.2104	150014	01.2490	150070	01.0091	150132	01.3131
140171	00.9384	140235	01.0237	150015	01.1202	150071	01.2236	150133	01.2285
140172	01.4158	140236	01.0312	150017	01.4539	150072	01.2508	150134	01.3121
140173	00.9744	140239	01.4310	150018	01.1798	150073	01.0510	150135	00.9137
140174	01.2443	140240	01.1835	150019	01.2287	150074	01.3923	150136	00.9726
140176	01.1747	140241	00.8900	150020	01.0245	150075	01.2148	160001	01.1394
140177	01.1543	140242	01.3237	150021	01.4465	150076	01.0215	160002	01.3235
140179	01.2453	140243	01.1024	150022	01.1249	150077	01.0801	160003	01.0385
140180	01.3092	140245	01.0052	150023	01.2796	150078	01.0446	160005	01.1167
140181	01.1988	140246	01.0430	150024	01.1734	150079	01.0440	160007	01.0611
140182	01.2882	140247	00.9893	150025	01.3747	150081	01.0869	160008	01.1018
140184	01.1180	140249	00.8511	150026	01.1428	150082	01.3369	160009	01.0812
140185	01.2514	140250	01.2501	150027	01.0700	150083	00.8258	160012	01.0877
140186	01.1467	140251	01.2631	150029	01.1116	150084	01.5644	160013	01.1887
140187	01.3236	140252	01.2545	150030	01.1008	150085	00.9349	160014	00.9880
140188	00.9930	140253	01.2860	150031	00.9536	150086	01.1986	160016	01.2178
140189	01.1346	140258	01.3148	150032	01.6046	150088	01.1709	160018	00.9710
140190	01.0328	140261	01.1773	150033	01.4836	150089	01.1925	160020	01.0810
140191	01.1875	140271	01.0908	150034	01.2257	150090	01.3069	160021	01.0422
140192	01.1133	140273	01.1163	150035	01.1607	150091	01.0717	160023	01.1328
140193	00.9786	140275	01.1285	150036	01.0454	150092	01.1462	160024	01.1971
140197	01.2954	140276	01.7978	150037	01.2065	150094	00.9975	160025	01.5356
140199	01.0895	140280	01.1424	150038	01.1562	150095	01.0432	160026	01.1423
140200	01.3632	140281	01.3882	150039	01.0045	150096	01.0144	160027	01.1162
140202	01.1750	140285	01.1325	150042	01.2090	150097	01.0393	160028	01.1353
140203	01.1069	140286	01.1486	150043	01.1420	150098	01.0641	160029	01.2220
140204	01.1826	140288	01.4706	150044	01.1997	150099	01.2590	160030	01.2547

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
160031	01.0491	160083	01.3769	160146	01.2681	170051	01.0571	170109	01.1114
160032	01.0491	160085	01.1991	160147	01.2597	170052	01.1265	170110	00.9382
160033	01.2409	160086	00.9906	160151	01.1181	170053	00.9988	170112	00.9919
160034	01.0115	160088	01.0530	160152	00.9973	170054	01.2209	170113	01.0817
160035	00.9878	160089	01.1468	160153	01.4817	170055	01.0197	170114	01.0634
160036	01.2011	160090	01.0134	170001	01.1830	170056	00.9736	170115	01.0886
160037	01.0598	160091	01.1783	170002	01.3194	170057	01.0530	170116	01.1520
160038	01.2264	160092	01.0282	170003	01.0996	170058	01.0787	170117	00.9610
160039	01.0236	160093	00.9438	170004	01.0865	170060	00.9722	170119	00.9825
160040	01.2300	160094	01.0873	170005	00.9049	170061	01.0274	170120	01.2023
160041	01.0804	160095	01.1214	170006	01.1377	170062	00.9727	170121	00.7789
160043	00.9813	160097	01.2719	170007	01.1288	170063	00.9240	170122	01.7018
160044	01.2776	160098	01.1109	170008	00.9768	170064	01.0121	170123	01.4024
160045	01.4535	160099	01.0962	170009	01.1357	170066	00.9782	170124	01.0691
160046	01.0685	160101	01.1685	170010	01.1159	170067	01.0992	170125	00.8854
160047	01.3144	160102	01.2797	170011	01.2218	170068	01.1595	170126	00.9186
160048	01.0635	160103	00.9054	170012	01.4133	170069	00.9744	170128	00.9879
160049	00.9087	160104	01.1440	170013	01.2618	170070	00.9669	170131	01.1532
160050	01.0112	160106	01.1348	170014	01.0788	170072	00.9600	170133	01.1917
160051	01.1898	160107	01.0580	170015	01.1098	170073	01.1564	170134	00.9813
160052	01.0815	160108	01.1785	170016	01.4723	170074	01.1275	170137	01.1487
160053	01.1159	160109	00.9880	170017	01.1404	170075	00.8709	170138	01.1873
160054	01.0026	160110	01.3949	170018	01.0176	170076	01.1685	170139	01.0653
160055	01.0276	160111	01.1509	170019	01.2514	170077	00.9513	170140	01.0227
160056	01.0425	160112	01.2228	170020	01.1670	170079	00.9273	170142	01.2397
160057	01.2249	160113	01.0794	170021	01.0350	170080	01.0134	170143	01.1534
160058	01.5278	160114	01.0196	170022	01.1168	170081	01.1675	170144	01.3442
160059	01.1840	160115	01.0545	170023	01.2920	170082	00.9302	170145	01.1969
160060	01.0334	160116	01.0616	170024	01.1328	170084	00.9284	170146	01.2524
160061	01.0859	160117	01.3334	170025	01.1899	170085	01.0548	170147	01.1728
160062	01.0822	160118	01.0966	170026	01.0553	170086	01.4636	170148	01.2664
160063	01.1555	160119	00.8666	170027	01.0961	170087	01.3156	170150	01.0662
160064	01.2402	160120	00.9798	170030	01.0331	170088	01.0575	170151	01.0116
160065	01.0829	160122	01.1818	170031	00.9749	170089	00.8971	170152	00.9568
160066	01.1127	160123	01.1194	170032	01.1183	170090	00.9560	170159	00.9357
160067	01.1947	160124	01.2245	170033	01.1941	170092	01.0121	170160	00.8992
160068	00.9619	160126	01.1374	170034	00.9462	170093	01.0464	170164	01.0647
160069	01.2606	160129	01.0884	170035	00.9587	170094	01.0130	170166	01.0784
160070	00.9757	160130	01.1351	170036	01.0132	170095	01.0892	170168	00.9479
160071	01.1363	160131	01.1795	170037	01.1613	170097	00.9163	170170	01.1873
160072	01.0736	160132	01.2312	170038	01.0249	170098	01.0609	170171	01.1785
160073	00.9434	160133	01.1827	170039	01.0385	170099	01.1514	170172	00.9506
160074	01.1974	160134	00.9581	170040	01.3623	170100	00.8458	170173	01.0687
160075	01.0566	160135	00.8906	170041	01.0730	170101	01.1518	170174	00.9140
160076	00.9213	160138	01.0599	170043	01.0297	170102	00.9858	170175	01.1650
160077	00.9795	160140	01.0753	170044	01.2684	170103	01.2094	170176	01.3500
160079	01.2346	160141	00.9636	170045	01.0721	170104	01.3310	180001	01.1154
160080	01.0700	160142	01.0755	170046	00.9003	170105	01.0647	180002	01.0290
160081	01.0930	160143	01.0173	170049	01.2467	170106	01.0453	180004	01.1162
160082	01.5047	160145	01.0079	170050	01.2862	170108	01.0704	180005	01.0443

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
180006	00.8822	180062	00.9000	180138	01.2151	190071	01.0313	190144	01.1286
180007	01.3173	180063	01.0098	180139	00.9772	190073	00.6197	190145	00.9860
180009	01.0909	180064	01.0453	190001	01.0588	190075	01.2048	190146	01.4029
180010	01.5725	180065	00.9601	190002	01.4557	190077	00.9387	190147	00.9949
180011	01.0579	180066	01.0515	190003	01.2700	190078	01.1899	190148	00.8727
180012	01.1487	180067	01.4854	190004	01.2029	190079	01.1229	190149	01.0240
180013	01.2270	180069	01.0397	190005	01.2223	190081	00.9569	190151	01.1646
180014	01.4665	180070	01.1252	190006	01.1096	190083	00.8979	190152	01.2660
180015	01.1582	180072	01.1844	190007	01.0036	190086	01.2241	190155	01.0330
180016	01.1799	180075	00.9271	190008	01.3926	190088	01.1343	190156	00.8790
180017	01.2423	180078	00.9670	190009	01.0358	190089	01.1535	190157	00.9404
180018	01.1600	180079	00.9813	190010	01.0956	190090	01.1601	190158	01.1730
180019	01.1252	180080	01.1449	190011	01.0474	190092	01.1436	190160	01.0468
180020	01.0390	180081	01.2898	190012	01.0562	190095	00.9942	190161	01.0704
180021	00.9212	180085	01.2200	190013	01.1913	190098	01.3143	190162	01.2575
180023	00.8430	180087	00.9840	190014	00.9800	190099	01.1468	190164	01.0981
180024	00.9966	180088	01.5113	190015	01.2286	190101	00.9177	190165	00.9765
180025	01.1551	180092	01.0265	190017	01.1905	190102	01.3258	190166	00.8840
180026	01.0665	180093	01.2926	190018	01.1989	190103	00.9519	190167	01.3134
180027	01.0522	180094	00.9724	190019	01.3979	190106	01.1548	190169	00.9581
180028	00.9395	180095	01.1607	190020	01.1180	190109	01.0407	190170	00.9979
180029	01.1668	180099	01.0019	190023	00.9554	190110	00.9731	190173	01.2558
180030	00.9833	180100	01.1512	190025	01.2138	190111	01.3695	190175	01.1546
180031	01.0255	180101	01.1935	190026	01.2637	190112	01.2577	190176	01.4076
180032	00.9109	180102	01.2758	190027	01.3151	190113	01.1312	190177	01.2477
180033	01.0705	180103	01.4695	190029	01.1405	190114	00.9452	190178	00.9381
180034	01.0283	180104	01.3050	190033	00.9227	190115	01.2183	190179	00.9657
180035	01.2347	180105	00.9041	190034	01.2170	190116	01.2351	190180	01.0247
180036	01.0623	180106	00.8847	190035	01.3032	190117	01.0285	190182	01.1084
180037	01.2276	180108	00.8955	190036	01.4464	190118	01.0502	190183	01.0623
180038	01.1832	180115	01.0828	190037	01.0406	190119	00.9864	190184	00.9296
180040	01.6375	180116	01.2327	190039	01.4367	190120	00.9702	190185	01.1671
180041	00.9689	180117	01.0351	190040	01.3997	190122	01.1856	190186	00.9908
180042	00.9854	180118	00.9506	190041	01.3468	190124	01.3630	190187	00.9015
180043	01.0240	180120	00.9322	190043	01.0883	190125	01.2327	190188	01.0306
180044	01.0056	180121	01.0908	190044	01.0493	190127	01.2051	190189	01.1133
180045	01.1154	180122	00.9992	190045	01.2060	190128	00.9072	190190	01.0706
180046	01.0007	180123	01.2387	190046	01.4027	190130	01.0297	190191	01.1343
180047	01.0037	180124	01.2868	190047	01.1211	190131	01.1397	190193	01.2029
180048	01.0890	180125	00.9502	190048	01.0405	190132	01.0806	190194	01.1250
180049	01.1546	180126	01.0266	190049	01.0604	190133	01.0274	190195	01.0321
180050	01.2401	180127	01.1047	190050	01.0699	190134	00.8758	190196	00.8783
180051	01.1989	180128	01.1214	190053	01.1687	190135	01.3510	190197	01.2284
180053	00.9250	180129	00.9810	190054	01.2660	190136	01.0098	190198	01.0978
180054	01.0597	180130	01.2892	190058	00.9711	190137	01.0198	190199	01.3892
180055	01.0026	180132	01.2297	190059	01.0172	190138	00.8341	190200	01.3126
180056	01.0988	180133	01.1865	190060	01.1493	190139	01.2885	190201	01.0620
180058	00.9058	180134	01.0701	190064	01.3665	190140	00.9851	190202	01.1932
180059	00.9523	180136	01.2497	190065	01.4354	190141	00.9410	190203	01.4573
180060	00.9458	180137	01.4364	190067	00.8838	190142	00.9225	190204	01.2961

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 10 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
190205	01.2154	210003	01.2041	210058	01.6963	220063	01.1271	220129	01.0463
190206	01.4488	210004	01.1856	210059	01.2091	220064	01.1993	220131	01.0848
190207	01.1243	210005	01.2410	220001	01.0894	220065	01.1352	220133	00.7639
190208	00.8410	210006	01.0407	220002	01.3685	220066	01.2907	220135	01.1004
200001	01.2956	210007	01.3999	220003	01.0589	220067	01.1925	220153	00.9977
200002	01.0803	210008	01.1645	220004	01.1933	220068	00.6145	220154	00.9326
200003	00.9528	210009	01.3731	220005	01.7524	220070	01.1266	220156	01.1535
200005	00.8999	210010	01.1508	220006	01.2251	220071	01.6295	220162	01.0970
200006	01.2472	210011	01.2211	220008	01.1856	220073	01.2250	220163	01.7825
200007	00.9944	210012	01.1876	220009	01.1220	220074	01.0916	220171	01.3210
200008	01.2128	210013	01.2696	220010	01.1781	220075	00.7357	230001	01.1484
200009	01.5584	210015	01.2053	220011	01.1952	220076	01.2065	230002	01.1439
200012	01.0702	210016	01.4904	220012	01.2365	220077	01.5401	230003	01.1764
200013	01.1315	210017	01.1413	220015	01.1704	220079	01.1513	230004	01.5003
200015	01.2198	210018	01.2303	220016	01.1857	220080	01.1981	230005	01.1799
200016	01.1158	210019	01.2781	220017	01.2339	220081	00.9137	230006	01.0449
200017	01.2254	210021	01.1693	220019	01.1597	220082	01.2325	230007	01.0424
200018	01.1319	210022	01.1686	220020	01.0966	220083	01.1739	230012	01.0893
200019	01.2459	210023	01.1487	220021	01.1638	220084	01.2176	230013	01.2375
200020	01.0846	210024	01.1988	220022	01.0535	220086	01.5125	230014	01.1250
200021	01.1455	210025	01.1045	220023	01.2132	220088	01.4589	230015	01.1288
200023	00.9166	210026	01.1990	220024	01.2178	220089	01.2636	230017	01.3891
200024	01.1667	210027	01.2123	220025	01.0914	220090	01.1480	230019	01.2618
200025	01.1771	210028	01.0643	220026	01.2320	220092	01.1786	230020	01.2597
200026	01.0181	210029	01.3254	220028	01.2332	220094	01.1946	230021	01.2107
200027	01.0993	210030	01.0657	220029	01.1272	220095	01.0863	230022	01.2157
200028	01.0217	210031	01.5727	220030	01.0643	220097	01.1228	230023	01.4729
200031	01.1887	210032	01.0726	220031	01.5993	220098	01.1681	230024	01.4416
200032	01.2919	210033	01.0926	220033	01.2143	220099	01.1148	230027	01.1031
200033	01.5908	210034	01.1557	220034	01.0699	220100	01.2896	230029	01.3649
200034	01.2410	210035	01.1360	220035	01.1483	220101	01.2653	230030	01.2258
200037	01.1466	210036	01.1869	220036	01.4257	220102	00.7716	230031	01.3476
200038	01.0481	210037	01.1617	220038	01.1960	220104	01.1418	230032	01.7267
200039	01.2650	210038	01.2131	220040	01.2245	220105	01.1067	230034	01.0586
200040	01.0777	210039	01.0847	220041	01.0992	220106	01.1262	230035	01.1124
200041	01.1426	210040	01.3033	220042	01.1151	220107	01.0811	230036	01.2473
200043	00.8462	210043	01.1605	220045	01.1521	220108	01.1054	230037	00.9760
200044	01.1189	210044	01.1583	220046	01.2773	220110	01.7772	230038	01.5167
200047	01.0143	210045	01.0571	220048	01.1912	220111	01.1656	230039	01.2807
200049	01.0682	210046	01.0756	220049	01.1737	220114	01.0735	230040	01.2118
200050	01.1620	210047	01.1680	220050	01.0097	220115	01.3274	230041	01.0944
200051	00.9944	210048	01.1378	220051	01.1832	220116	01.7063	230042	01.1206
200052	01.0863	210049	01.1912	220052	01.2188	220117	00.9755	230043	00.7616
200055	01.1034	210050	00.6727	220053	01.2270	220118	01.7607	230044	02.2960
200058	00.7741	210051	01.2062	220055	01.1770	220119	01.2585	230046	01.5724
200062	01.0092	210052	00.8868	220057	01.2476	220120	01.0223	230047	01.1319
200063	01.2194	210054	01.2059	220058	01.0760	220121	01.1060	230051	01.0140
200066	01.2235	210055	01.1665	220060	01.1254	220123	00.9660	230052	00.5004
210001	01.2439	210056	01.3251	220061	01.2464	220126	01.2458	230053	01.3593
210002	01.5459	210057	01.1381	220062	01.0120	220128	01.1638	230054	01.4047

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 11 OF 24

PROVIDER	CASE MIX
230055	01.0954
230056	00.9836
230058	01.0956
230059	01.4062
230060	01.1136
230062	01.1000
230063	01.1930
230065	01.2420
230066	01.1651
230067	00.7144
230068	01.3264
230069	01.1155
230070	01.3053
230071	00.6673
230072	01.1201
230075	01.2539
230076	01.1415
230077	01.7574
230078	01.0825
230080	01.1817
230081	01.1169
230082	01.1564
230084	01.0395
230085	01.0948
230086	01.0318
230087	01.1045
230089	01.2799
230090	01.4326
230092	01.2767
230093	01.1347
230095	01.0810
230096	01.1043
230097	01.2554
230098	01.2083
230099	01.1173
230100	01.1029
230101	01.1057
230102	01.1982
230103	01.0671
230104	01.3915
230105	01.4191
230106	01.0605
230107	01.0302
230108	01.1270
230110	01.1940
230111	01.0071
230113	00.9683
230114	00.8589
230115	00.9262
230116	00.8698
230117	01.7576
230118	01.1963
230119	01.0749
230120	01.0767
230121	01.1401
230122	01.2599
230124	01.0674
230125	01.3085
230128	01.3377
230129	01.7785
230130	01.3703
230132	01.2694
230133	01.1763
230134	01.0516
230135	01.2460
230137	01.1077
230138	00.8733
230140	01.0999
230141	01.4146
230142	01.1548
230143	01.3385
230144	01.1805
230145	01.1808
230146	01.1845
230147	01.2642
230149	01.1482
230150	01.5696
230151	01.3513
230153	01.1942
230154	01.1114
230155	01.0295
230156	01.5113
230157	01.2645
230158	00.9684
230159	01.2578
230161	01.1880
230162	00.9881
230163	00.9437
230165	01.5701
230167	01.2092
230169	01.2130
230171	01.1895
230172	01.0934
230173	01.1681
230174	01.1716
230175	00.9602
230176	01.1130
230178	01.0964
230179	00.9550
230180	01.1016
230181	01.0443
230184	01.0618
230186	01.0428
230187	00.9695
230188	01.0988
230189	00.9550
230190	01.0681
230191	00.9144
230193	01.2300
230194	01.1860
230195	01.3029
230197	01.2396
230199	01.2055
230201	01.1043
230204	01.2917
230205	01.2330
230207	01.1710
230208	01.2603
230211	00.9552
230212	01.0251
230213	01.0119
230216	01.3133
230217	01.2730
230219	00.9027
230221	01.2411
230222	01.2021
230223	01.2882
230224	01.0872
230225	01.0319
230227	01.2163
230228	01.2585
230230	01.2835
230232	01.0369
230235	01.0277
230236	01.2794
230237	01.2039
230239	01.0967
230241	01.0972
230244	01.2753
230253	01.1008
230254	01.1904
230256	01.0306
230257	00.9777
230259	01.0991
230264	01.2189
230265	01.0108
230266	01.2566
230269	01.2283
230270	01.2020
230271	02.2639
230273	01.3125
230275	01.0995
230276	00.6868
230277	01.1199
240001	01.3670
240002	01.5274
240003	01.1562
240004	01.3926
240005	00.9498
240006	01.2972
240007	01.0425
240008	01.0385
240009	01.1232
240010	01.8396
240011	01.0428
240013	01.1298
240014	01.0838
240016	01.2604
240017	01.1821
240018	01.2200
240019	01.4872
240020	01.1860
240021	00.9939
240022	01.0313
240023	01.0254
240025	01.2362
240026	01.3236
240027	01.0598
240028	01.1894
240029	01.1545
240030	01.2960
240031	00.9293
240033	00.8306
240036	01.2799
240037	01.0034
240038	01.3056
240040	01.1092
240041	01.1393
240043	01.1439
240044	01.0755
240045	00.9907
240046	01.2668
240047	01.2754
240048	01.2490
240049	01.6048
240050	01.0628
240051	00.9497
240052	01.2328
240053	01.4172
240056	01.3214
240057	01.6040
240058	00.9494
240059	01.1073
240061	01.4398
240062	01.1046
240063	01.3529
240064	01.2343
240065	01.0160
240066	01.1826
240069	01.1179
240071	01.0801
240072	00.9897
240073	00.9722
240074	01.0013
240075	01.1787
240076	01.1198
240077	00.9802
240078	01.3305
240079	01.1436
240080	01.3569
240081	01.2028
240082	01.3057
240083	01.1684
240084	01.2638
240085	00.9170
240086	01.1239
240087	01.1926
240088	01.4173
240089	00.9598
240090	01.0692
240091	01.0723
240093	01.2947
240094	01.0434
240096	01.0709
240097	01.1411
240098	00.9346
240099	01.1463
240100	01.2099
240101	01.1675
240102	00.9537
240103	01.1468
240104	01.2139
240105	00.9201
240106	01.2271
240107	01.0318
240108	01.0412
240109	01.0505
240110	01.0476
240111	00.9839
240112	01.0694

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 12 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
240114	01.0467	240172	01.0652	250037	00.9556	250100	01.1637	260016	01.1020
240115	01.2388	240173	01.0630	250038	00.8645	250101	00.8906	260017	01.2775
240116	00.9791	240175	00.7999	250039	01.0037	250102	01.3812	260018	00.9877
240117	01.2106	240176	00.8914	250040	01.1035	250104	01.2098	260019	01.0379
240118	00.9722	240179	01.0460	250042	01.0990	250105	00.9585	260020	01.4176
240119	00.9282	240180	00.9391	250043	00.8879	250107	00.9062	260021	01.2230
240121	00.9187	240183	01.1668	250044	01.0065	250109	00.9612	260022	01.4091
240122	01.0723	240184	00.9863	250045	01.1037	250110	00.9216	260023	01.3000
240123	01.0558	240187	01.1465	250046	00.9832	250111	00.8421	260024	01.0812
240124	01.0347	240192	01.0696	250047	00.9154	250112	00.9931	260025	01.1807
240125	00.9985	240193	00.9419	250048	01.2514	250113	01.0023	260026	01.0381
240127	01.0015	240196	01.4155	250049	00.8886	250114	00.8673	260027	01.3967
240128	01.0860	240200	00.9228	250050	01.0879	250117	01.0068	260029	01.2052
240129	00.8928	240201	01.0748	250051	00.9338	250118	01.0498	260030	01.1744
240130	01.0214	240205	00.8532	250057	01.0724	250119	00.9650	260031	01.4053
240131	01.1856	240206	00.8990	250058	01.1308	250120	00.9759	260032	01.4636
240132	01.2136	240207	01.1778	250059	00.9974	250121	00.9793	260033	01.3407
240133	01.1796	240210	01.2887	250060	00.8446	250122	01.2053	260034	01.0371
240134	01.1563	250001	01.3808	250061	00.9994	250123	01.1410	260035	00.9975
240135	00.9003	250002	00.8896	250062	00.9482	250124	00.9062	260036	01.0716
240136	00.9770	250003	00.9490	250063	00.8951	250125	01.0824	260037	01.2658
240137	01.1120	250004	01.3244	250065	00.9982	250126	01.0144	260039	01.2144
240138	00.8462	250005	00.9580	250066	00.9279	250127	00.8654	260040	01.4228
240139	01.0202	250006	00.9914	250067	01.0870	250128	01.0252	260041	00.9710
240140	00.8270	250007	01.1214	250068	00.8595	250129	01.0524	260042	01.1834
240141	00.9528	250008	00.8730	250069	01.1867	250131	00.9978	260044	01.1720
240142	01.1080	250009	01.0857	250071	01.0213	250132	01.0906	260047	01.1860
240143	01.0761	250010	01.0175	250072	01.1471	250133	00.8240	260048	01.1583
240144	01.0258	250012	00.9592	250073	00.9356	250134	01.0515	260049	00.9507
240145	01.0808	250014	01.1362	250075	00.9196	250136	00.8113	260050	01.0352
240146	01.0028	250015	01.0110	250076	00.9252	250137	00.9043	260051	01.0702
240148	00.9133	250016	00.8832	250077	00.9839	250138	01.0222	260052	01.1468
240150	01.0321	250017	00.9173	250078	01.2721	250139	00.9424	260053	01.0684
240152	01.0496	250018	00.9533	250079	00.8424	250140	00.8235	260054	01.2756
240153	00.9800	250019	01.2459	250081	01.1195	250141	01.0266	260055	01.1076
240154	01.0122	250020	00.9580	250082	01.1345	260001	01.4589	260057	01.1716
240155	01.0116	250021	00.9246	250083	00.9045	260002	01.3391	260058	01.2230
240156	01.1273	250023	00.8811	250084	01.1159	260003	01.0516	260059	00.9716
240157	01.0952	250024	00.9447	250085	00.9619	260004	01.0523	260061	01.1344
240158	01.1434	250025	01.0577	250086	01.0453	260005	01.2179	260062	01.1421
240160	00.9795	250026	00.8543	250088	01.0483	260006	01.2818	260063	01.2006
240161	01.0583	250027	00.9231	250089	01.0233	260007	01.1638	260064	01.2900
240162	01.1388	250029	00.8903	250091	00.9572	260008	01.2590	260065	01.4109
240163	00.9595	250030	00.9184	250093	01.1505	260009	01.1722	260066	01.0168
240165	00.8820	250031	01.1550	250094	01.1677	260010	01.2130	260067	01.0452
240166	01.0583	250032	01.1833	250095	01.0669	260011	01.2887	260068	01.7477
240167	00.8933	250033	00.9449	250096	01.1525	260012	00.9580	260070	01.1221
240169	00.9798	250034	01.3063	250097	01.1120	260013	01.1531	260073	00.9905
240170	01.1096	250035	00.8840	250098	00.9073	260014	01.4968	260074	01.1130
240171	01.1122	250036	00.9591	250099	01.1287	260015	01.0477	260077	01.2713

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
260078	01.1478	260159	01.0595	270029	01.0162	280015	01.0826	280076	00.9971
260079	01.0391	260160	01.1328	270030	00.9879	280017	01.2023	280077	01.3052
260080	01.1307	260162	01.1691	270031	00.9193	280018	00.9300	280078	01.0287
260081	01.4223	260163	01.1598	270032	01.1296	280020	01.4110	280079	00.9473
260082	01.1716	260164	01.0963	270033	00.9151	280021	01.3452	280080	01.0138
260085	01.4059	260165	01.0408	270035	01.0278	280022	01.0366	280081	01.3519
260086	01.0603	260166	01.1672	270036	00.9497	280023	01.3247	280082	00.9065
260088	01.0580	260171	00.8579	270039	01.0250	280024	00.8971	280083	01.0288
260089	01.1016	260172	01.1014	270040	01.0932	280025	01.0475	280084	00.9719
260090	01.3212	260173	01.1337	270041	00.9235	280026	01.0422	280085	01.3827
260091	01.5353	260175	01.1530	270042	01.3576	280028	00.9274	280088	01.4888
260092	01.0232	260176	01.4218	270043	00.7848	280029	01.0182	280089	00.9747
260093	00.9616	260177	01.3079	270044	00.9965	280030	01.5147	280090	01.0190
260094	01.0761	260178	01.3458	270046	00.9241	280031	01.1076	280091	01.0645
260095	01.3211	260179	01.4513	270047	00.8360	280032	01.1613	280092	00.9186
260096	01.3407	260180	01.4805	270048	00.9979	280033	00.9770	280093	00.9818
260097	01.2305	260182	01.0764	270049	01.2776	280034	01.2669	280094	00.9443
260100	01.1946	260183	01.2778	270050	00.9361	280035	01.0536	280097	00.8394
260102	01.0954	260186	01.1007	270051	01.1107	280037	01.0347	280098	01.0127
260103	01.2923	260188	01.1741	270052	00.8992	280038	01.1077	280101	00.9728
260104	01.4356	260189	01.0060	270053	00.7984	280039	01.0614	280102	00.9478
260105	01.7345	260190	01.1254	270055	00.7839	280040	01.4763	280103	00.9296
260107	01.3030	260191	01.2138	270057	01.1722	280041	01.0189	280104	01.0288
260108	01.6014	260192	00.7763	270058	00.9562	280042	01.1376	280105	01.1509
260109	00.9193	260193	01.1530	270059	00.9312	280043	00.9696	280106	01.0647
260110	01.4090	260195	01.0400	270060	00.8683	280045	01.0566	280107	01.2198
260111	01.0895	260197	01.1335	270063	00.9684	280046	01.0472	280108	01.0431
260112	01.3273	260198	01.3028	270067	00.9068	280047	01.1740	280109	00.9487
260113	01.1637	260200	01.0874	270068	00.9168	280048	01.1706	280110	01.0547
260115	01.1792	270001	00.9084	270071	00.9423	280049	01.0808	280111	01.1756
260116	01.0948	270002	01.1818	270072	00.8826	280050	01.0127	280114	00.9631
260118	01.2306	270003	01.0800	270073	01.0557	280051	01.0228	280115	01.0939
260119	01.1949	270004	01.6627	270074	00.9069	280052	01.1421	280117	01.1933
260120	01.2251	270006	01.0243	270075	00.8853	280054	01.2085	280118	01.1561
260122	01.1324	270007	00.8904	270076	00.8877	280055	00.9553	280119	00.8622
260123	00.9803	270008	00.9758	270079	00.9333	280056	01.1515	280122	00.8463
260127	01.0254	270009	00.9772	270080	01.0864	280057	01.0289	280123	01.4823
260128	01.0288	270011	01.1112	270081	00.9846	280058	01.0972	290001	01.3874
260129	01.0576	270012	01.3462	270082	00.8880	280060	01.3318	290002	01.0181
260131	01.2662	270013	01.1921	270083	01.0575	280061	01.2929	290003	01.5365
260134	01.0929	270014	01.4081	280001	01.1952	280062	01.1520	290005	01.2161
260137	01.1957	270016	00.8381	280003	01.6710	280064	01.0847	290006	01.0105
260138	01.5735	270017	01.2501	280004	01.1548	280065	01.2578	290007	01.4616
260141	01.7542	270019	00.8790	280005	01.3737	280066	01.1352	290008	01.2743
260142	01.2060	270021	01.0982	280009	01.3359	280068	00.9455	290009	01.3332
260143	01.3448	270023	01.3234	280010	01.1528	280070	00.9637	290010	01.0801
260146	00.9981	270024	00.9275	280011	01.0470	280071	00.9293	290011	01.0840
260147	01.0412	270026	00.9289	280012	01.2721	280073	01.0014	290012	01.1762
260148	00.8987	270027	01.0366	280013	01.4889	280074	01.1116	290013	00.9867
260158	01.0927	270028	01.0208	280014	01.0872	280075	01.1280	290014	00.9341

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
290015	00.9222	310014	01.4531	310072	01.1955	320019	01.2551	330023	01.2492
290016	01.1301	310015	01.3034	310073	01.1892	320021	01.5682	330024	01.5195
290018	00.9539	310016	01.1491	310074	01.2488	320022	01.2553	330025	01.0636
290019	01.1376	310017	01.2792	310075	01.1930	320023	01.0761	330027	01.3510
290020	01.0059	310018	01.1003	310076	01.2694	320030	01.0099	330028	01.1991
290021	01.5100	310019	01.4919	310077	01.5041	320031	00.9275	330029	01.1801
290022	01.5704	310020	01.1816	310078	01.2687	320032	00.9740	330030	01.1688
290027	01.0632	310021	01.1942	310081	01.1580	320033	01.1553	330033	01.3094
290029	00.9645	310022	01.2130	310083	01.2001	320035	00.9493	330034	01.2151
290031	00.9334	310024	01.2146	310084	01.1788	320037	01.2222	330036	01.0494
290032	01.3114	310025	01.1210	310085	01.2090	320038	01.1546	330037	01.1369
290033	01.1030	310026	01.1950	310086	01.2112	320046	01.0156	330038	01.1697
300001	01.2284	310027	01.1982	310087	01.1822	320048	01.0841	330039	01.0648
300002	01.0383	310028	01.1352	310088	01.2124	320053	00.9867	330041	01.3450
300003	01.6213	310029	01.6302	310090	01.2125	320056	00.8418	330043	01.1559
300005	01.3309	310031	02.0595	310091	01.1838	320057	00.9943	330044	01.2177
300006	01.0718	310032	01.0881	310092	01.2393	320058	00.8156	330045	01.2490
300007	01.1151	310033	01.1895	310093	01.0692	320059	00.9849	330046	01.4671
300008	01.2121	310034	01.1524	310094	01.1251	320060	01.0082	330047	01.2483
300009	01.1714	310036	01.1994	310096	01.4261	320061	01.0500	330048	01.2002
300010	01.2810	310037	01.2146	310105	01.1658	320062	00.8837	330049	01.3425
300011	01.2339	310038	01.4703	310108	01.1663	320063	01.2401	330052	01.3469
300012	01.2550	310039	01.1922	310110	01.1404	320065	01.1450	330053	01.0956
300013	01.2149	310040	01.0910	310111	01.2272	320067	00.9036	330055	01.2853
300014	01.2192	310041	01.2274	310112	01.1115	320068	01.0216	330056	01.2892
300015	01.0905	310042	01.1073	310113	01.2000	320069	01.0869	330057	01.3535
300016	01.1808	310043	01.2097	310115	01.1740	320070	00.8825	330058	01.2194
300017	01.2002	310044	01.2240	310116	01.2088	320072	01.7165	330059	01.3837
300018	01.1475	310045	01.0699	310118	01.1754	320074	01.0761	330061	01.2696
300019	01.1393	310047	01.2653	310119	01.2491	320076	01.1331	330062	01.1211
300020	01.1599	310048	01.1803	310120	01.0928	320077	00.8570	330064	01.2862
300021	01.1907	310049	01.2413	310121	01.0083	330001	01.1465	330065	01.2498
300022	01.1438	310050	01.1673	310515	00.8235	330002	01.3256	330066	01.1535
300023	01.2364	310051	01.2946	310529	01.8632	330003	01.2904	330067	01.3113
300024	01.2121	310052	01.2035	310534	01.1804	330004	01.2399	330072	01.2314
300028	01.1184	310054	01.2501	320001	01.3186	330005	01.4460	330073	01.1591
300029	01.2640	310056	01.2026	320002	01.2043	330006	01.3434	330074	01.1693
300033	01.0411	310057	01.2494	320003	01.2486	330007	01.2020	330075	01.0217
300034	01.4569	310058	01.0990	320004	01.1172	330008	01.1708	330076	01.1811
310001	01.4478	310059	00.9008	320005	01.2050	330009	01.0988	330078	01.3192
310002	01.6868	310060	01.1801	320006	01.1651	330010	01.1964	330079	01.1705
310003	01.1532	310061	01.1361	320009	01.2425	330011	01.1458	330080	01.1777
310005	01.1548	310062	01.1246	320010	01.2359	330012	01.4634	330082	01.2271
310006	01.1380	310063	01.2690	320011	00.9934	330013	01.8216	330084	01.0297
310008	01.2200	310064	01.2047	320012	00.9950	330014	01.2317	330085	01.3223
310009	01.1401	310067	01.1934	320013	00.9925	330015	01.2986	330086	01.1819
310010	01.2103	310068	01.1960	320014	00.8886	330016	01.0421	330088	01.1634
310011	01.2154	310069	01.0753	320016	01.0747	330019	01.2607	330090	01.5462
310012	01.2769	310070	01.2250	320017	01.1747	330020	01.0071	330091	01.1932
310013	01.2617	310071	01.1866	320018	01.2142	330022	01.0139	330092	01.0858

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 15 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
330094	01.2719	330167	01.3600	330231	01.1357	330316	01.2978	340010	01.3177
330095	01.2271	330168	01.0525	330232	01.1975	330320	01.1645	340011	01.1068
330096	01.0896	330169	01.2012	330233	01.3152	330327	00.9587	340012	01.0685
330097	01.1953	330171	01.2762	330234	01.7221	330331	01.1551	340013	01.2343
330100	00.5967	330174	00.9846	330235	01.1848	330332	01.1379	340014	01.4451
330101	01.4460	330175	01.0689	330236	01.3259	330333	01.1906	340015	01.2415
330102	01.1908	330176	00.8862	330238	01.1078	330335	01.1618	340016	01.1898
330103	01.1858	330177	01.1210	330239	01.1584	330336	01.1487	340017	01.1909
330104	01.2783	330179	00.9525	330240	01.1430	330338	01.1139	340018	01.1899
330106	01.5460	330180	01.2349	330241	01.6745	330339	01.0191	340019	01.1235
330107	01.1467	330181	01.2526	330242	01.2722	330340	01.0798	340020	01.2056
330108	01.2839	330182	02.0728	330244	00.9910	330350	01.6104	340021	01.2942
330110	00.9945	330183	01.3233	330245	01.2049	330351	01.1020	340022	01.1426
330111	01.1512	330184	01.2514	330246	01.1933	330353	01.1701	340023	01.2903
330114	00.9971	330185	01.1377	330247	00.5682	330354	01.0681	340024	01.2224
330115	01.1777	330186	01.1316	330249	01.1939	330357	01.2427	340025	01.1187
330116	00.9573	330188	01.1544	330250	01.1897	330359	01.0263	340026	01.0012
330118	01.4698	330189	00.8132	330252	00.9576	330362	00.6889	340027	01.1494
330119	01.2953	330191	01.2470	330254	00.9763	330363	00.7558	340028	01.3159
330120	01.6218	330193	01.3260	330257	01.0250	330366	00.7092	340030	01.6488
330121	01.0448	330194	01.4025	330258	01.2630	330367	00.6320	340031	01.0472
330122	01.1830	330195	01.4417	330259	01.1936	330368	00.6981	340032	01.3302
330125	01.5712	330196	01.2553	330261	01.2144	330369	00.7100	340034	01.2800
330126	01.1313	330197	01.0464	330263	01.0924	330371	00.7562	340035	01.0812
330127	01.2208	330198	01.2341	330264	01.1420	330372	01.2251	340036	01.1235
330128	01.2076	330199	01.1842	330265	01.2827	330373	00.6566	340037	01.1828
330132	01.0939	330201	01.3811	330267	01.1818	330381	01.1116	340038	01.1941
330133	01.2231	330202	01.1690	330268	01.1516	330383	01.2041	340039	01.1870
330135	01.1754	330203	01.3419	330270	01.8429	330385	01.2071	340040	01.6306
330136	01.3136	330204	01.1770	330272	00.9732	330386	01.1856	340041	01.2132
330140	01.5009	330205	01.1188	330273	01.1781	330387	01.0455	340042	01.2633
330141	01.2124	330208	01.1900	330275	01.2390	330389	01.7896	340044	01.0186
330142	01.1928	330209	01.1767	330276	01.2519	330390	01.1897	340045	00.9925
330144	01.0315	330210	01.0955	330277	01.1271	330391	01.4905	340047	01.6050
330148	01.0408	330211	01.1280	330279	01.2004	330393	01.4623	340049	00.6112
330151	01.1807	330212	01.0916	330281	00.7380	330394	01.2107	340050	01.1864
330152	01.3022	330213	01.1264	330285	01.4477	330395	01.3028	340051	01.2635
330153	01.2917	330214	01.5647	330286	01.1917	330396	01.1961	340052	00.9839
330154	01.3703	330215	01.2006	330288	01.0614	330397	01.2696	340053	01.4538
330155	01.1245	330217	01.1197	330290	01.5542	330398	01.1950	340054	01.1382
330157	01.2669	330218	01.2078	330291	01.1154	330399	01.2251	340055	01.1812
330158	01.2451	330219	01.3642	330293	01.1136	340001	01.2286	340060	01.1592
330159	01.3172	330221	01.2596	330297	01.1676	340002	01.6502	340061	01.5457
330160	01.2513	330222	01.1741	330304	01.1894	340003	01.1764	340063	01.0911
330161	01.0509	330223	01.1489	330306	01.2971	340004	01.3597	340064	01.0492
330162	01.2541	330224	01.2313	330307	01.1256	340005	01.2701	340065	01.1592
330163	01.1688	330225	01.2008	330308	01.1991	340006	01.0918	340067	01.0327
330164	01.3494	330226	01.2208	330309	01.2223	340007	01.1586	340068	01.2316
330165	01.0402	330229	01.2139	330314	01.1919	340008	01.0612	340069	01.6220
330166	00.9944	330230	01.3755	330315	01.1173	340009	00.9203	340070	01.2488

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 16 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
340071	01.0065	340138	01.1107	350032	01.0077	360028	01.2009	360082	01.2475
340072	01.1262	340141	01.4100	350033	00.9001	360029	01.1108	360083	01.0960
340073	01.2619	340142	01.1780	350034	00.9724	360030	01.0821	360084	01.3321
340075	01.1741	340143	01.3117	350035	00.8314	360031	01.1770	360085	01.5024
340076	01.0829	340144	01.2140	350036	00.9750	360032	01.1472	360086	01.2106
340079	00.9839	340145	01.1947	350038	00.9280	360034	01.0676	360087	01.2342
340080	01.1210	340146	00.9652	350039	00.8993	360035	01.3807	360088	01.0393
340084	01.0871	340147	01.2244	350041	00.9877	360036	01.1465	360089	01.0922
340085	01.2156	340148	01.2614	350042	00.9563	360037	01.5464	360090	01.2110
340087	01.1159	340151	01.0962	350043	01.1504	360038	01.2910	360091	01.2639
340088	01.1335	340153	01.9135	350044	00.8903	360039	01.1942	360092	01.1543
340089	00.9783	340154	00.9245	350047	01.0149	360040	01.1333	360093	01.1354
340090	01.1653	340155	01.3579	350049	01.0129	360041	01.2226	360094	01.1923
340091	01.4730	340156	00.8746	350050	00.8586	360042	01.1865	360095	01.2252
340093	01.0329	340157	01.2375	350051	00.8543	360044	01.1313	360096	01.0630
340094	01.3880	340158	01.1222	350053	00.9632	360045	01.3485	360098	01.2726
340096	01.1446	340159	01.1740	350055	00.8615	360046	01.0785	360099	01.0628
340097	01.0599	340160	01.0662	350056	00.9211	360047	01.0517	360100	01.2954
340098	01.5589	340162	01.2620	350058	00.9663	360048	01.4283	360101	01.3169
340099	01.2436	340164	01.2395	350060	00.9323	360049	01.1561	360102	01.2298
340100	01.3713	340166	01.2609	350061	00.9804	360050	01.2007	360103	01.2727
340101	01.2988	340167	00.7110	350063	00.8494	360051	01.3724	360104	01.0156
340104	00.9835	350001	01.0572	350064	00.8751	360052	01.4292	360106	01.1498
340105	01.3209	350002	01.4201	350065	00.9899	360053	01.2340	360107	01.1017
340106	01.1703	350003	01.1801	350066	00.8966	360054	01.2353	360108	01.1293
340107	01.2525	350004	01.6341	350067	00.8274	360055	01.1796	360109	01.0847
340109	01.3208	350005	01.1784	360001	01.1534	360056	01.2089	360112	01.4145
340111	01.2354	350006	01.1588	360002	01.1331	360057	00.9999	360113	01.1892
340112	01.0746	350007	00.9519	360003	01.3071	360058	01.0916	360114	01.0466
340113	01.8346	350008	00.8962	360006	01.5396	360059	01.3029	360115	01.1244
340114	01.2747	350009	01.1546	360007	01.0556	360061	00.4262	360116	01.0650
340115	01.3273	350010	01.1125	360008	01.2000	360062	01.4391	360118	01.2229
340116	01.4720	350011	01.4848	360009	01.2073	360063	01.0015	360119	01.0923
340119	01.2552	350012	00.9552	360010	01.1242	360064	01.3362	360120	00.8457
340120	01.1186	350013	00.9824	360011	01.2695	360065	01.2061	360121	01.0776
340121	01.1097	350014	00.9595	360012	01.2656	360066	01.1662	360122	01.1994
340122	00.9904	350015	01.5256	360013	01.1245	360067	01.1817	360123	01.1396
340123	01.1926	350016	01.1029	360014	01.1998	360068	01.3169	360124	01.2787
340124	01.0834	350017	01.2443	360015	01.3849	360069	01.0604	360125	01.1276
340125	01.4517	350018	00.9584	360016	01.3244	360070	01.2386	360126	01.2067
340126	01.2629	350019	01.3772	360017	01.4946	360071	01.1860	360127	00.9921
340127	01.1842	350020	01.1781	360018	01.3064	360072	01.2325	360128	01.1389
340129	01.1830	350021	01.0109	360019	01.1515	360074	01.2416	360129	01.0374
340130	01.2787	350023	00.9419	360020	01.2066	360075	01.3274	360130	01.1309
340131	01.3150	350024	00.9724	360021	01.2216	360076	01.2013	360131	01.1670
340132	01.2319	350025	01.0111	360022	01.1452	360077	01.3392	360132	01.1513
340133	01.1049	350027	01.0132	360024	01.1277	360078	01.2486	360133	01.3562
340135	01.0090	350029	00.8758	360025	01.1022	360079	01.4643	360134	01.3389
340136	00.9386	350030	01.0977	360026	01.1017	360080	01.1890	360135	01.1027
340137	01.0904	350031	01.0236	360027	01.4239	360081	01.2475	360136	01.0476

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
360137	01.4445	360204	01.1478	370042	00.8790	370117	01.1678	380009	01.5313
360139	01.0859	360210	01.1799	370043	00.9685	370121	01.1297	380010	01.1563
360140	01.0207	360211	01.1099	370045	01.0661	370122	00.9509	380011	01.0362
360141	01.2875	360212	01.3357	370046	01.0641	370123	01.1266	380013	01.0911
360142	01.0347	360213	01.0816	370047	01.0519	370125	00.9866	380014	01.1893
360143	01.1635	360218	01.2806	370048	01.0012	370126	01.0259	380017	01.5658
360144	01.2971	360230	01.2562	370049	01.0465	370130	01.0441	380018	01.6160
360145	01.3106	360231	01.1032	370050	00.9810	370131	00.9439	380019	01.2234
360147	01.1926	360232	01.0744	370051	01.0241	370133	00.9519	380020	01.3448
360148	01.2030	360234	01.2068	370054	01.1115	370138	01.0730	380021	01.2184
360149	01.0715	360236	01.1513	370056	01.2334	370139	01.0670	380022	01.2184
360150	01.1576	360238	01.0214	370057	01.1627	370140	01.0143	380023	01.1997
360151	01.2658	360239	01.1944	370059	01.1493	370141	01.3503	380024	01.2917
360152	01.3128	360240	01.0715	370060	01.0030	370144	01.1792	380025	01.2788
360153	01.1197	360241	00.6245	370061	00.8962	370146	00.9792	380026	01.2355
360154	01.1020	370001	01.6131	370063	01.1145	370148	01.2466	380027	01.2959
360155	01.1114	370002	01.1089	370064	00.9765	370149	01.1861	380029	01.1044
360156	01.0972	370004	01.0825	370065	01.1755	370153	01.0922	380030	00.8939
360159	01.1776	370005	00.9277	370069	01.0585	370154	00.9744	380031	00.9752
360161	01.2607	370006	01.1036	370071	00.9042	370156	01.0184	380033	01.5087
360162	01.1362	370007	01.1354	370072	00.9974	370157	00.9519	380035	01.2431
360163	01.4476	370008	01.2060	370076	01.0991	370158	01.0646	380036	01.0658
360164	01.2028	370011	00.9387	370077	01.1849	370159	01.1582	380037	01.1830
360165	00.9773	370012	00.9422	370078	01.4785	370161	01.0094	380038	01.2104
360166	00.9788	370013	01.3361	370079	00.9261	370163	00.9150	380039	01.2802
360168	00.9507	370014	01.2114	370080	01.0133	370165	00.9924	380040	01.1174
360169	01.0513	370015	01.1474	370082	00.9391	370166	01.0158	380042	01.0990
360170	01.0627	370016	01.2267	370083	01.0128	370168	00.8946	380043	01.0026
360171	01.1411	370017	00.9485	370084	00.9310	370169	01.0569	380044	01.0950
360172	01.2771	370018	01.1959	370085	00.9737	370170	01.0757	380045	01.1619
360174	01.1212	370019	01.0674	370086	01.0480	370171	00.9843	380047	01.4537
360175	01.1510	370020	01.1834	370089	01.2387	370172	00.9523	380048	00.9800
360176	01.2061	370021	01.0645	370091	01.4286	370173	01.0338	380050	01.2879
360177	01.0760	370022	01.1723	370092	01.0174	370174	00.8956	380051	01.2786
360178	01.2194	370023	01.1639	370093	01.4528	370176	01.1786	380052	01.1816
360179	01.1860	370025	01.2460	370094	01.1850	370177	00.9237	380055	01.1631
360180	01.8383	370026	01.2646	370095	00.9645	370178	01.0214	380056	00.9905
360184	01.0749	370028	01.4672	370096	00.9767	370179	01.0653	380059	01.0158
360185	01.2205	370029	01.2556	370097	01.2539	370180	01.1839	380060	01.2942
360186	00.9348	370030	01.1819	370099	01.0273	370182	01.0019	380061	01.4338
360187	01.1956	370032	01.2627	370100	01.1227	370183	01.0659	380062	00.9023
360188	01.0656	370033	01.0689	370103	01.0367	370184	01.2652	380063	01.1304
360189	01.1063	370034	01.1171	370105	01.8082	380001	01.3686	380064	01.2515
360192	01.2233	370035	01.3649	370106	01.3040	380002	01.1766	380065	01.1183
360193	01.1973	370036	01.1144	370107	01.0025	380003	01.0878	380066	01.1261
360194	01.1096	370037	01.5324	370108	00.9576	380004	01.6610	380068	01.0543
360195	01.2209	370038	00.9222	370110	00.9720	380005	01.1449	380069	01.0728
360197	01.1090	370039	01.1497	370112	00.9919	380006	01.1643	380070	01.0106
360200	01.1491	370040	01.1098	370113	01.1604	380007	01.5342	380071	01.2195
360203	01.1271	370041	00.9861	370114	01.4606	380008	01.1378	380072	00.8791

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 18 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
380075	01.2605	390039	01.0932	390095	01.2483	390154	01.1076	390213	01.0095
380077	00.9016	390040	01.0468	390096	01.2145	390155	01.2901	390215	01.1651
380078	01.1324	390041	01.1317	390097	01.3468	390156	01.2487	390217	01.0763
380079	01.1381	390042	01.1914	390098	01.5562	390157	01.1680	390219	01.1984
380081	00.9754	390043	01.0434	390100	01.5892	390158	01.2594	390220	01.2065
380082	01.2092	390044	01.4258	390101	01.2121	390159	01.1823	390222	01.2305
380083	01.1119	390045	01.2396	390102	01.2246	390160	01.1428	390223	01.5457
380084	01.4275	390046	01.3569	390103	01.0904	390161	01.0759	390224	00.9392
380087	01.0093	390047	01.4004	390104	01.1416	390162	01.1738	390225	01.2799
380088	01.0713	390048	01.1501	390106	01.0130	390163	01.1647	390226	01.4793
380089	01.2662	390049	01.3262	390107	01.1658	390164	01.5181	390228	01.2149
380090	01.3393	390050	01.7372	390108	01.2403	390165	01.0894	390229	01.3260
380091	01.2188	390051	01.9545	390109	01.2559	390166	01.1400	390231	01.2674
380094	01.1119	390052	01.0869	390110	01.1732	390167	01.1948	390232	01.0683
390001	01.1929	390054	01.1907	390111	01.6401	390168	01.1537	390233	01.2260
390002	01.2233	390055	01.4745	390112	01.1378	390169	01.2107	390234	01.3283
390003	01.1085	390056	01.1356	390113	01.1736	390170	01.5511	390235	01.6045
390004	01.2565	390057	01.2496	390114	01.0281	390171	01.0614	390236	01.0833
390005	01.1100	390058	01.2720	390115	01.2370	390172	01.1250	390237	01.4369
390006	01.4926	390059	01.4112	390116	01.1935	390173	01.0968	390238	00.8379
390007	01.1705	390060	01.1843	390117	01.0749	390174	01.4980	390242	01.1886
390008	01.1562	390061	01.2265	390118	01.1373	390176	01.1054	390244	00.9405
390009	01.3479	390062	01.1187	390119	01.2176	390178	01.3301	390245	01.2478
390010	01.0985	390063	01.4816	390121	01.1837	390179	01.2140	390246	01.1126
390011	01.1874	390064	01.3125	390122	01.0940	390180	01.2807	390247	01.0552
390012	01.2118	390065	01.1933	390123	01.1994	390181	01.0818	390249	01.0604
390013	01.1793	390066	01.2193	390125	01.1684	390183	01.0689	390252	00.8870
390014	00.8572	390067	01.4933	390126	01.2058	390184	01.0951	390256	01.5671
390015	01.1282	390068	01.2839	390127	01.1344	390185	01.1709	390258	01.1628
390016	01.1163	390069	01.1629	390128	01.1149	390186	01.1193	390260	01.2531
390017	01.0695	390070	01.1327	390130	01.0023	390187	01.1546	390261	01.6843
390018	01.1796	390071	01.1089	390131	01.2124	390188	01.0672	390262	01.3949
390019	01.0854	390072	00.9864	390132	01.0019	390189	01.0655	390263	01.4805
390020	01.2760	390073	01.1963	390133	01.3347	390191	01.1248	390265	01.2555
390021	01.0647	390074	01.1652	390135	01.2726	390192	01.0615	390266	01.1367
390022	01.1081	390075	01.2700	390136	01.1965	390193	01.1713	390267	01.1539
390023	01.1943	390076	01.2237	390137	01.0944	390194	01.0681	390268	01.1427
390024	00.7158	390077	01.2891	390138	01.2488	390195	01.3574	390270	01.2261
390025	00.8763	390078	01.0861	390139	01.4397	390196	01.1390	390272	00.6141
390026	01.2193	390079	01.6124	390142	01.5239	390197	01.2568	390275	00.5819
390027	01.5544	390080	01.1792	390143	00.9163	390198	01.2441	390276	01.1254
390028	01.5855	390081	01.1880	390145	01.1799	390199	01.2416	390277	01.1756
390029	01.4955	390083	01.1955	390146	01.1277	390200	01.0178	390278	01.3306
390030	01.1254	390084	01.1488	390147	01.1516	390201	01.3304	400001	01.1564
390031	01.1550	390086	01.1445	390148	01.0722	390203	01.2619	400002	01.2881
390032	01.1546	390088	01.3184	390149	01.2052	390204	01.1750	400003	01.1416
390034	01.0873	390090	01.5500	390150	01.1239	390205	01.1574	400004	01.1215
390035	01.3011	390091	01.1455	390151	01.1988	390206	01.2300	400005	01.0700
390036	01.2677	390092	01.1482	390152	01.0642	390209	01.0371	400006	01.2031
390037	01.1917	390093	01.1191	390153	01.1720	390211	01.1670	400007	01.1118

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
400008	01.1208	400119	01.1743	420048	01.0320	430018	00.9465	440002	01.3394
400009	00.9595	410001	01.1909	420049	01.1222	430020	01.0657	440003	01.1015
400010	01.0626	410002	01.1517	420050	00.9860	430022	00.9338	440005	00.9542
400011	01.0981	410004	01.2985	420051	01.4450	430023	00.9398	440006	01.2204
400012	00.9818	410005	01.2579	420053	01.1117	430024	01.0622	440007	00.9796
400013	00.9262	410006	01.2303	420054	01.1211	430025	00.9305	440008	01.0251
400014	01.3371	410007	01.4260	420055	01.1230	430026	01.0065	440009	00.9738
400015	01.0968	410008	01.0862	420056	01.1045	430027	01.5974	440010	00.9949
400016	01.2577	410009	01.2105	420057	01.2098	430028	00.9756	440011	01.2391
400017	01.0372	410010	00.9837	420059	01.0652	430029	00.8819	440012	01.2205
400018	01.0846	410011	01.1692	420061	01.1724	430030	01.0189	440014	00.9314
400019	01.1651	410012	01.3775	420062	01.0728	430031	00.9479	440015	01.3950
400021	01.3341	410013	01.1471	420064	01.0677	430033	01.0362	440016	00.9782
400022	01.2422	410014	01.1269	420065	01.2914	430034	01.0722	440017	01.2530
400023	00.5382	410016	01.0001	420066	00.9648	430036	01.0793	440018	01.1630
400024	01.1138	420002	01.2692	420067	01.1587	430037	00.9304	440019	01.4245
400026	01.0128	420003	01.1183	420068	01.2248	430038	01.0431	440020	01.0253
400027	01.0873	420004	01.7415	420069	01.1294	430039	01.0626	440022	01.0752
400028	01.0369	420005	01.0502	420070	01.2584	430040	00.9362	440023	00.9228
400029	01.1085	420006	01.2321	420071	01.2145	430041	01.0674	440024	01.1108
400031	00.9623	420007	01.4340	420072	00.9409	430042	00.9824	440025	01.0685
400032	01.2361	420009	01.2086	420073	01.2557	430043	01.0422	440026	01.1559
400037	00.9891	420010	01.0785	420074	01.0075	430044	00.8694	440029	01.2044
400038	01.1497	420011	01.0564	420075	01.0104	430047	01.1749	440030	01.0481
400044	01.0639	420014	01.0679	420076	01.0749	430048	01.0699	440031	01.0167
400048	01.1230	420015	01.1400	420078	01.3824	430049	00.9637	440032	00.9803
400061	01.4333	420016	01.1706	420079	01.3738	430051	00.9062	440033	01.0581
400079	01.0895	420017	01.0401	420080	01.2434	430054	00.9285	440034	01.2654
400083	00.9053	420018	01.5070	420081	01.0235	430056	00.8877	440035	01.1520
400087	01.2332	420019	01.2001	420082	01.3537	430057	00.9244	440038	00.9416
400088	00.8380	420020	01.1802	420083	01.1735	430060	01.0642	440039	01.4746
400089	01.0847	420022	01.2079	420084	00.6700	430062	00.9005	440040	00.9779
400090	01.1710	420023	01.2600	420085	01.2739	430064	01.0470	440041	00.9157
400094	01.0558	420026	01.7561	420086	01.2008	430065	00.9846	440046	00.9745
400098	01.0228	420027	01.1283	420087	01.3575	430066	01.0061	440047	00.9181
400102	01.1516	420028	01.0282	420088	01.1590	430072	01.1529	440048	01.3318
400103	01.4508	420029	01.4459	420089	01.1700	430073	01.0725	440049	01.4217
400104	01.1099	420030	01.1539	430004	01.0430	430076	01.0196	440050	01.0667
400105	01.2216	420031	00.8987	430005	01.1935	430077	01.3034	440051	01.0038
400106	01.0074	420032	00.9225	430007	01.0621	430079	01.0118	440052	00.9128
400109	01.0811	420033	01.2305	430008	01.2125	430080	00.9624	440053	01.1780
400110	01.1512	420035	00.7801	430009	01.0608	430081	01.0234	440054	00.9484
400111	01.1180	420036	01.2247	430010	00.9798	430082	00.8908	440055	01.1313
400112	01.1919	420037	01.2174	430011	01.2607	430083	00.8727	440056	00.9374
400113	01.0993	420038	01.0682	430012	01.2179	430084	00.8902	440057	00.9436
400114	01.0391	420039	01.0992	430013	01.1411	430085	00.9072	440058	01.0578
400115	01.0314	420040	01.3275	430014	01.3188	430086	00.8754	440059	01.0731
400116	01.1152	420042	01.0776	430015	01.0512	430087	00.8299	440060	01.0326
400117	01.1323	420043	01.1569	430016	01.3676	430088	01.1009	440061	01.1467
400118	01.0530	420044	01.1773	430017	01.1147	440001	01.0234	440063	01.1814

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 20 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
440064	00.9677	440148	00.9819	450014	01.0893	450076	01.1265	450144	01.1340
440065	01.0177	440149	01.1441	450015	01.4098	450077	01.0098	450145	01.0444
440067	01.0977	440150	01.2531	450016	01.4124	450078	01.0118	450146	00.9320
440068	01.1044	440151	01.0968	450018	01.3499	450079	01.3564	450147	01.2590
440069	01.2223	440152	01.3664	450019	01.1843	450080	01.2501	450148	01.3097
440070	00.9596	440153	00.9116	450020	01.0901	450081	01.1930	450149	01.2984
440071	01.1687	440154	00.7888	450021	01.5089	450082	01.0094	450150	01.0076
440072	01.2322	440156	01.2412	450022	01.0892	450083	01.3340	450151	01.0406
440073	01.1488	440157	00.8702	450023	01.3477	450084	01.1225	450152	01.3967
440074	00.9333	440159	01.1509	450024	01.0776	450085	01.1726	450153	01.3622
440078	00.9144	440160	01.0615	450025	01.3646	450087	01.2809	450154	01.2028
440079	00.8134	440161	01.5451	450027	01.1044	450090	01.2619	450155	01.0743
440081	01.1400	440162	01.0815	450028	01.2983	450092	01.2655	450157	01.0429
440082	01.6390	440166	01.2513	450029	01.1757	450094	01.2227	450160	00.9312
440083	00.9359	440167	01.1794	450031	01.2066	450096	01.3907	450162	01.3776
440084	01.1100	440168	00.9629	450032	01.1297	450097	01.2460	450163	01.1582
440087	00.9133	440170	01.2973	450033	01.4844	450098	01.0578	450164	01.0773
440090	01.0467	440171	00.9408	450034	01.4387	450099	01.1811	450165	01.0359
440091	01.2732	440173	01.2953	450035	01.3947	450101	01.2606	450166	01.0441
440095	00.9946	440174	00.9103	450037	01.4165	450102	01.4350	450169	00.9154
440100	01.0447	440175	01.0462	450039	01.1431	450104	01.2081	450170	01.1353
440102	01.0182	440176	01.1672	450040	01.4721	450107	01.2739	450175	01.1587
440103	01.1339	440177	00.8927	450041	01.0751	450108	01.0025	450176	01.1847
440104	01.3806	440178	01.1807	450042	01.4811	450109	01.0436	450177	01.0967
440105	01.0377	440180	00.9670	450043	01.2790	450110	01.1751	450178	01.0821
440109	01.0469	440181	00.9881	450044	01.5285	450111	01.2946	450179	01.0607
440110	01.0293	440182	00.8769	450045	01.0524	450112	01.2371	450181	01.0359
440111	01.1921	440183	01.2549	450046	01.3530	450113	01.0524	450182	00.8907
440113	01.0857	440184	01.0819	450047	01.0546	450115	01.1009	450183	01.1893
440114	01.0088	440185	01.0935	450048	01.0927	450116	01.0570	450184	01.3707
440115	01.0595	440186	01.0029	450050	01.1509	450118	01.3087	450185	01.0882
440117	00.8802	440187	00.9443	450051	01.5636	450119	01.2391	450187	01.3671
440120	01.2836	440189	01.4041	450052	01.1156	450121	01.3441	450188	01.0588
440121	01.1254	440191	01.1987	450053	01.0975	450122	00.9370	450190	01.2150
440125	01.2054	440192	01.0418	450054	01.4845	450123	01.2125	450191	01.2168
440128	00.7701	440193	01.1149	450055	01.1157	450124	01.4691	450192	01.0931
440130	01.1374	440194	01.1217	450056	01.3821	450126	01.2019	450193	02.0216
440131	01.0699	440196	01.0243	450057	01.1009	450127	01.0173	450194	01.1783
440132	00.9831	440197	01.3213	450058	01.3684	450128	01.2357	450195	01.2445
440133	01.3515	440200	01.0466	450059	01.1732	450130	01.4665	450196	01.2667
440135	01.1684	440203	01.0010	450060	01.3086	450131	01.1881	450197	01.1624
440136	01.0974	440205	00.8966	450063	00.9598	450132	01.3776	450200	01.2108
440137	01.0682	450002	01.2402	450064	01.3799	450133	01.2429	450201	01.0589
440141	00.9607	450004	01.0890	450065	01.1103	450134	01.1696	450203	01.1654
440142	00.8558	450005	00.9874	450066	01.6111	450135	01.4549	450206	00.9687
440143	01.0150	450007	01.3417	450068	01.3671	450137	01.2059	450207	01.1486
440144	01.0741	450008	01.2580	450070	01.0854	450140	00.8891	450208	01.0974
440145	00.9493	450010	01.2228	450072	01.1828	450141	00.9897	450209	01.2250
440146	01.0801	450011	01.3376	450073	01.0335	450142	01.2731	450210	01.1219
440147	00.8575	450013	01.3739	450074	01.1127	450143	01.0478	450211	01.2188

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
450213	01.3296	450305	00.9217	450395	01.2083	450537	01.1993	450630	01.5245
450214	01.1514	450306	01.0841	450399	01.0937	450538	01.3223	450631	01.5288
450217	00.9745	450307	01.1231	450400	01.1670	450539	01.1835	450632	01.1401
450218	01.0257	450309	01.1158	450403	01.2858	450544	01.2305	450633	01.4530
450219	01.1310	450315	01.2913	450410	01.0577	450545	01.2858	450634	01.2031
450221	01.1108	450317	00.9523	450411	01.0472	450546	01.2714	450637	01.1891
450222	01.3122	450320	01.2426	450415	01.1733	450547	00.9789	450638	01.4243
450224	01.0657	450321	00.9891	450416	01.2246	450550	01.1591	450639	01.3336
450229	01.3339	450322	00.9371	450417	00.9416	450551	00.9822	450641	00.9136
450230	01.1359	450324	01.4034	450418	01.3164	450557	00.9823	450643	01.1221
450231	01.4555	450325	01.2378	450419	01.2721	450558	01.6725	450644	02.3754
450233	01.0693	450327	01.1265	450422	00.7628	450559	01.0410	450646	01.3196
450234	00.9009	450330	01.2393	450423	01.1967	450561	01.3514	450647	01.6839
450235	01.1982	450331	01.2416	450424	01.1241	450563	01.1481	450648	01.1469
450236	01.1148	450332	01.1595	450425	01.0790	450565	01.1790	450649	01.0349
450237	01.3772	450333	01.1013	450429	00.9887	450568	00.5500	450651	01.4291
450239	01.1319	450334	01.0272	450431	01.3919	450569	01.0399	450652	00.9460
450241	00.9384	450337	01.0808	450438	01.2324	450570	00.9656	450653	01.3241
450242	00.8334	450340	01.2375	450446	00.9815	450571	01.2547	450654	00.9778
450243	00.9817	450341	00.9575	450447	01.2841	450573	01.1023	450656	01.2814
450246	01.2482	450342	00.8975	450450	01.0006	450574	00.9550	450658	01.0000
450248	01.1071	450346	01.2596	450451	01.1807	450575	01.0507	450659	01.4071
450249	00.9957	450347	01.2091	450457	01.4371	450578	01.1206	450660	01.4631
450250	01.0288	450348	01.0774	450458	00.9929	450580	01.1543	450661	01.0239
450253	01.0418	450349	01.3012	450460	00.9946	450581	01.1466	450662	01.2287
450256	01.0640	450351	01.3360	450462	01.3287	450583	01.0636	450665	01.1006
450258	00.9169	450352	01.2298	450464	00.8700	450584	01.2469	450666	01.2752
450259	01.2949	450353	01.1943	450465	01.1471	450586	01.1681	450667	00.9903
450263	01.2475	450355	00.9924	450467	01.1109	450587	01.1743	450668	01.4250
450264	00.8718	450357	01.1819	450469	01.2279	450588	00.9099	450669	01.2328
450268	01.2049	450358	01.6676	450472	01.1607	450590	00.9102	450670	01.1357
450269	00.9854	450359	00.7835	450473	01.0561	450591	01.1517	450671	00.5912
450270	01.0879	450362	00.9871	450475	01.0682	450596	01.2654	450672	01.4030
450271	01.2353	450365	01.1108	450476	00.9459	450597	01.1044	450673	00.9803
450272	01.2070	450366	01.3985	450484	01.2626	450600	01.0378	450674	00.9729
450275	01.0523	450369	01.1332	450486	00.9926	450603	00.9369	450675	01.1845
450276	01.1848	450370	01.0809	450488	01.0401	450604	01.2569	450677	01.3541
450278	00.9931	450371	01.0553	450489	01.0961	450605	01.3123	450678	01.3329
450280	01.2879	450372	01.2884	450492	00.9078	450607	00.9047	450679	00.9653
450281	01.3561	450373	01.0847	450497	01.1902	450609	00.9536	450681	01.4633
450283	01.1163	450374	00.8964	450498	00.9744	450610	01.2752	450682	01.2154
450286	01.1696	450376	01.3579	450508	01.2817	450613	00.9796	450683	01.2346
450288	01.1257	450378	01.2773	450514	01.1706	450614	01.1186	450684	01.2030
450289	01.1673	450379	01.4183	450517	01.0051	450615	00.9863	450685	01.2735
450292	01.1979	450381	01.0458	450518	01.1727	450617	01.3685	450686	01.3118
450293	00.8808	450388	01.5616	450523	01.3874	450620	01.2071	450687	01.0986
450296	01.1124	450389	01.1861	450527	01.0593	450621	01.0351	450688	01.1469
450297	01.0694	450391	01.1598	450530	01.3108	450623	01.0521	450690	01.2302
450299	01.2712	450393	01.2734	450534	01.0526	450626	01.0547	450691	01.3292
450303	00.9649	450394	01.2471	450535	01.2359	450628	00.9597	450694	01.1827

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 22 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
450696	01.1247	460005	01.2591	470020	00.9840	490059	01.2705	490126	01.1596
450697	01.3527	460006	01.2581	470023	01.2344	490060	01.0060	490127	01.0437
450698	00.8414	460007	01.1767	470024	01.1370	490063	01.4075	490129	00.9140
450700	00.9730	460008	01.2851	490001	01.0161	490066	01.0809	490130	01.2101
450702	01.2408	460009	01.5178	490002	00.9415	490067	01.1224	490131	00.9826
450703	01.1226	460010	01.7501	490003	00.6947	490069	01.1850	500001	01.3094
450704	01.1948	460011	01.2045	490004	01.1720	490071	01.1472	500002	01.3650
450705	00.9639	460012	01.4481	490005	01.2961	490073	01.1579	500003	01.3258
450706	01.1832	460013	01.4276	490006	01.1853	490074	01.2468	500005	01.5560
450709	01.1300	460014	01.0781	490007	01.6107	490075	01.2049	500007	01.3017
450710	00.5681	460015	01.1917	490008	01.0358	490077	01.1490	500008	01.9216
450711	01.4647	460016	00.9409	490009	01.5393	490078	00.8858	500009	01.3211
450712	00.7111	460017	01.2914	490010	01.2076	490079	01.1414	500010	01.1610
450713	01.2356	460018	00.9071	490011	01.2034	490083	00.7229	500011	01.2427
450715	01.2627	460019	01.0779	490012	01.0939	490084	01.1119	500012	01.4408
450716	01.1328	460020	00.8948	490013	01.0985	490085	01.0206	500014	01.5665
450717	01.2811	460021	01.2538	490014	01.4124	490088	01.1483	500015	01.2876
450718	01.1080	460022	00.9685	490015	01.2550	490089	01.0015	500016	01.3265
450719	01.1367	460023	01.1293	490017	01.2722	490090	01.1674	500017	01.2307
450722	00.9315	460024	00.8805	490018	01.1031	490091	01.2350	500019	01.1262
450723	01.2356	460025	00.9890	490019	01.1452	490092	01.0768	500021	01.3798
450724	01.3073	460026	01.0070	490020	01.0687	490093	01.2400	500023	01.1441
450725	00.8773	460027	00.9124	490021	01.0937	490094	01.0663	500024	01.3454
450726	01.0021	460029	00.8758	490022	01.2163	490095	01.2197	500025	01.8038
450727	01.0740	460030	01.0277	490023	01.1242	490097	01.0905	500026	01.2427
450728	01.0158	460032	00.9486	490024	01.4301	490098	01.2437	500027	01.5117
450729	00.8320	460033	00.9121	490027	01.0821	490099	01.0632	500028	00.9039
450730	01.3287	460035	00.9386	490028	01.1483	490100	01.2411	500029	00.9366
450732	01.0330	460036	00.9848	490029	01.0555	490101	01.0744	500030	01.3866
450733	01.2150	460037	00.9631	490030	01.2681	490104	00.8440	500031	01.1067
450734	01.1184	460039	00.9386	490031	01.0979	490105	00.8439	500033	01.1722
450735	00.8393	460041	01.1890	490032	01.6151	490106	00.9368	500034	01.0610
450737	00.8470	460042	01.3061	490033	01.2038	490107	01.1990	500035	01.4094
450740	01.1782	460043	01.3454	490035	01.1024	490108	00.9628	500036	01.2599
450742	01.2326	460044	01.1606	490037	01.1258	490109	00.8214	500037	01.0674
450743	01.2307	460046	01.2615	490038	01.1710	490110	01.0849	500039	01.2253
450744	01.0571	460047	01.4768	490040	01.1873	490111	01.0860	500040	01.1223
450745	00.9790	470001	01.1731	490041	01.1146	490112	01.3922	500041	01.2113
450746	00.9363	470003	01.6504	490042	01.1805	490113	01.1487	500042	01.2151
450747	01.1123	470004	01.1518	490043	01.1804	490114	01.0546	500043	01.2156
450748	00.9454	470005	01.2575	490044	01.2035	490115	01.1527	500044	01.8660
450749	01.1066	470006	01.2205	490045	01.1783	490116	01.0486	500045	01.1599
450750	00.9606	470008	01.1695	490046	01.2434	490117	01.0594	500046	01.3356
450751	01.2410	470010	01.0747	490047	01.1912	490118	01.4869	500048	00.9704
450752	01.3436	470011	01.2150	490048	01.2140	490119	01.2300	500049	01.2697
450753	00.9600	470012	01.2342	490050	01.1853	490120	01.2615	500050	01.1101
450754	01.1419	470013	01.0985	490052	01.3252	490122	01.1537	500051	01.6541
460001	01.5623	470015	01.1980	490053	01.2096	490123	01.0791	500052	01.1844
460003	01.4735	470016	01.0633	490054	01.1254	490124	01.2468	500053	01.1440
460004	01.5081	470018	01.0305	490057	01.2201	490125	00.9664	500054	01.7279

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
500055	01.0404	500132	00.9356	510059	00.7881	520031	01.1429	520096	01.1635
500057	01.1427	500134	00.9788	510060	01.1315	520032	01.2337	520097	01.2435
500058	01.2472	500135	01.1740	510061	01.0151	520033	01.2087	520098	01.5491
500059	01.2490	500138	01.9087	510062	01.1126	520034	01.2552	520100	01.1312
500060	01.1067	500139	01.2112	510063	01.2137	520035	01.1849	520101	01.1285
500061	01.1352	500140	00.9230	510064	01.1921	520037	01.5513	520102	01.1042
500062	01.0376	500141	01.2264	510065	01.0192	520038	01.2741	520103	01.2674
500064	01.4094	510001	01.3927	510066	01.1348	520039	01.0462	520104	00.9350
500065	01.1890	510002	01.1583	510067	01.1703	520040	01.2840	520105	00.9882
500068	01.0097	510004	00.9672	510068	01.2122	520041	01.0963	520107	01.1931
500069	01.0452	510005	01.0298	510070	01.1241	520042	01.0753	520109	01.0340
500071	01.1436	510006	01.2578	510071	01.2951	520043	01.5259	520110	00.9842
500072	01.1929	510007	01.2633	510072	01.0935	520044	01.3066	520111	01.0842
500073	01.1040	510008	01.1691	510074	00.9719	520045	01.4578	520112	01.0571
500074	01.1226	510009	01.1226	510076	00.9443	520047	00.9802	520113	01.1882
500075	01.1994	510011	00.9275	510077	01.0195	520048	01.3295	520114	01.1025
500076	01.2577	510012	01.0788	510080	00.9098	520049	01.6291	520115	01.1911
500077	01.2317	510013	01.1959	510081	01.0956	520051	01.7015	520116	01.2008
500078	01.2997	510014	01.1227	510082	00.9619	520053	01.0529	520117	01.0381
500079	01.2323	510015	00.9666	510084	00.9684	520054	01.1315	520118	00.9271
500080	01.0415	510016	00.9795	510085	01.1916	520056	01.1908	520120	01.0187
500084	01.0454	510018	01.1568	510086	00.9982	520057	01.0622	520121	01.0265
500085	01.0106	510019	00.8450	520001	01.2003	520058	01.0562	520122	00.9646
500086	01.3021	510020	01.0276	520002	01.2686	520059	01.2495	520123	01.0405
500087	01.2927	510022	01.4281	520003	01.1570	520060	01.1794	520124	01.1227
500088	01.3410	510023	01.0256	520004	01.2580	520062	01.2403	520126	00.9422
500089	01.0765	510024	01.2139	520006	01.0764	520063	01.2331	520127	00.8891
500090	00.8102	510025	00.9525	520007	01.0425	520064	01.4111	520130	00.9935
500092	01.0683	510026	00.9751	520008	01.1810	520065	01.1942	520131	01.1100
500093	01.1752	510027	01.1057	520009	01.3080	520068	00.9969	520132	01.2245
500094	01.2375	510028	01.1472	520010	01.1251	520069	01.2731	520134	01.0429
500095	01.0732	510029	01.2053	520011	01.1111	520070	01.2983	520135	00.9672
500097	01.0870	510030	01.0877	520012	01.0168	520071	01.0943	520136	01.3792
500098	00.9185	510031	01.2118	520013	01.2143	520074	01.0752	520138	01.6006
500100	00.9420	510033	01.2082	520014	01.2033	520075	01.2866	520139	01.2557
500101	01.0243	510035	00.9859	520015	01.2422	520076	01.2018	520140	01.3364
500102	00.9194	510036	01.1424	520016	01.0360	520077	01.0219	520141	01.0159
500104	01.2074	510038	01.1180	520017	01.1211	520078	01.2643	520142	00.9592
500106	00.9988	510039	01.1523	520018	01.1239	520081	01.2130	520143	00.9658
500107	01.1085	510040	00.9844	520019	01.2157	520082	01.2135	520144	01.0215
500108	01.6258	510043	01.0624	520020	01.3702	520083	01.4231	520145	01.0605
500110	01.1993	510045	00.9200	520021	01.2224	520084	01.0762	520146	01.1166
500114	01.2725	510046	01.3013	520022	00.9047	520087	01.3960	520148	01.1609
500118	01.2135	510047	01.1466	520024	00.9507	520088	01.1734	520149	01.1397
500119	01.3155	510048	01.1186	520025	01.1095	520089	01.3051	520151	00.9909
500122	01.2703	510050	01.2085	520026	01.0568	520090	01.1266	520152	01.1183
500123	00.9195	510053	00.9948	520027	01.1920	520091	01.3568	520153	01.0144
500124	01.2461	510054	00.9631	520028	01.3302	520092	01.1371	520154	01.1251
500125	01.1877	510055	01.1603	520029	00.9203	520094	01.1770	520156	01.1445
500129	01.5829	510058	01.2043	520030	01.4113	520095	01.2184	520157	01.0194

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1988 PAGE 24 OF 24

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
520159	00.9510								
520160	01.6802								
520161	01.0789								
520167	01.2024								
520170	01.1597								
520171	00.9884								
520173	01.0720								
520174	01.3501								
520175	00.7845								
520176	01.0479								
520177	01.3435								
520178	01.2202								
520180	00.8769								
520182	00.5903								
520184	00.5903								
520185	00.7765								
530001	01.0697								
530002	01.1829								
530003	00.9011								
530004	01.0615								
530005	01.0553								
530006	01.0747								
530007	01.1911								
530008	01.0528								
530009	01.0299								
530010	01.1765								
530011	01.1985								
530012	01.4532								
530014	01.1365								
530015	01.1031								
530016	01.1550								
530017	00.9712								
530018	01.0479								
530019	00.9129								
530022	01.0234								
530023	00.8912								
530024	01.0850								
530025	01.2335								
530026	01.0530								
530027	00.9366								
530029	01.0747								
530031	00.9318								

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1989.

BILLING CODE 4120-03-C

TABLE 4A.—WAGE INDEX FOR URBAN AREAS

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Abilene, TX	0.8833
Taylor, TX	
Aguadilla, PR	0.4591
Aguada, PR	
Aguadilla, PR	
Isabella, PR	
Moca, PR	
Akron, OH	0.9620
Portage, OH	
Summit, OH	
Albany, GA	0.7791
Dougherty, GA	
Lee, GA	
Albany-Schenectady-Troy, NY	0.8697
Albany, NY	
Greene, NY	
Montgomery, NY	
Rensselaer, NY	
Saratoga, NY	
Schenectady, NY	
Albuquerque, NM	0.9949
Bernalillo, NM	
Alexandria, LA	0.8468
Rapides, LA	
Allentown-Bethlehem, PA-NJ	0.9873
Warren, NJ	
Carbon, PA	
Lehigh, PA	
Northampton, PA	
Altoona, PA	0.9513
Blair, PA	
Amarillo TX	0.9589
Potter, TX	
Randall, TX	
*Anaheim-Santa Ana, CA	1.2181
Orange, CA	
Anchorage, AK	1.4320
Anchorage, AK	
Anderson, IN	0.9149
Madison, IN	
Anderson, SC	0.7799
Anderson, SC	
Ann Arbor, MI	1.1580
Washtenaw, MI	
Anniston, AL	0.7673
Calhoun, AL	
Appleton-Oshkosh-Neenah, WI	0.9512
Calumet, WI	
Outagamie, WI	
Winnebago, WI	
Arecibo, PR	0.4370
Arecibo, PR	
Camuy, PR	
Hatillo, PR	
Quebradillas, PR	
Asheville, NC	0.8672
Buncombe, NC	
Athens, GA	0.7719
Clarke, GA	
Jackson, GA	
Madison, GA	
Oconee, GA	
*Atlanta, GA	0.9293
Barrow, GA	
Butts, GA	
Cherokee, GA	
Clayton, GA	
Cobb, GA	
Coweta, GA	
De Kalb, GA	
Douglas, GA	
Fayette, GA	
Forsyth, GA	
Fulton, GA	
Gwinnett, GA	
Henry, GA	
Newton, GA	
Paulding, GA	
Rockdale, GA	
Spalding, GA	
Walton, GA	
Atlantic City, NJ	0.9849
Atlantic, NJ	
Cape May, NJ	
Augusta, GA-SC	0.8777
Columbia, GA	
McDuffie, GA	
Richmond, GA	
Aiken, SC	
Aurora-Elgin, IL	0.9879
Kane, IL	
Kendall, IL	
Austin, TX	1.0294
Hays, TX	
Travis, TX	
Williamson, TX	
Bakersfield, CA	1.0878
Kern, CA	
*Baltimore, MD	0.9864
Anne Arundel, MD	
Baltimore, MD	
Baltimore City, MD	
Carroll, MD	
Harford, MD	
Howard, MD	
Queen Annes, MD	
Bangor, ME	0.9043
Penobscot, ME	
Baton Rouge, LA	0.9556
Ascension, LA	
East Baton Rouge, LA	
Livingston, LA	
West Baton Rouge, LA	
Battle Creek, MI	0.9641
Calhoun, MI	
Beaumont-Port Arthur, TX	0.9457
Hardin, TX	
Jefferson, TX	
Orange, TX	
Beaver County, PA	1.0454
Beaver, PA	
Bellingham, WA	1.0845
Whatcom, WA	
Benton Harbor, MI	0.8482
Berrien, MI	
*Bergen-Passaic, NJ	1.0484
Bergen, NJ	
Passaic, NJ	
Billings, MT	0.9882
Yellowstone, MT	
Biloxi-Gulfport, MS	0.8031
Hancock, MS	
Harrison, MS	
Binghamton, NY	0.9213
Broome, NY	
Tioga, NY	
Birmingham, AL	0.9352
Blount, AL	
Jefferson, AL	
Saint Clair, AL	
Shelby, AL	
Walker, AL	
Bismarck, ND	0.9270
Burleigh, ND	
Morton, ND	
Bloomington, IN	0.9112
Monroe, IN	
Bloomington-Normal, IL	0.9656
McLean, IL	
Boise City, ID	1.0168
Ada, ID	
*Boston-Lawrence-Salem-Lowell-Brockton, MA	1.0813
Essex, MA	
Middlesex, MA	
Norfolk, MA	
Plymouth, MA	
Suffolk, MA	
Boulder-Longmont, CO	1.0771
Boulder, CO	
Bradenton, FL	0.8932
Manatee, FL	
Brazoria, TX	0.8767
Brazoria, TX	
Bremerton, WA	0.9573
Kitsap, WA	
Bridgeport-Stamford-Norwalk-Danbury, CT	1.1306
Fairfield, CT	
Brownsville-Harlingen, TX	0.8698
Cameron, TX	
Bryan-College Station, TX	0.9740
Brazos, TX	
Buffalo, NY	0.9395
Erie, NY	
Burlington, NC	0.7634
Alamance, NC	
Burlington, VT	0.9391
Chittenden, VT	
Grand Isle, VT	
Caguas, PR	0.3973
Caguas, PR	
Gurabo, PR	
San Lorenz, PR	
Aguas Buenas, PR	
Cayey, PR	
Cidra, PR	
Canton, OH	0.8903
Carroll, OH	
Stark, OH	
Casper, WY	0.9277
Natrona, WY	
Cedar Rapids, IA	0.8910
Linn, IA	
Champaign-Urbana-Rantoul, IL	0.8904
Champaign, IL	
Charleston, SC	0.8542
Berkeley, SC	
Charleston, SC	
Dorchester, SC	
Charleston, WV	0.9647
Kanawha, WV	
Putnam, WV	
*Charlotte-Gastonia-Rock Hill, NC-SC	0.8373
Cabarrus, NC	
Gaston, NC	
Lincoln, NC	
Mecklenburg, NC	
Rowan, NC	
Union, NC	
York, SC	
Charlottesville VA	0.8845

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Albemarle, VA	
Charlottesville City, VA	
Fluvanna, VA	
Greene,VA	
Chattanooga, TN-GA	0.8881
Catoosa, GA	
Dade, GA	
Walker, GA	
Hamilton, TN	
Marion, TN	
Sequatchie, TN	
Cheyenne, WY	0.8786
Laramie, WY	
*Chicago, IL	1.0843
Cook, IL	
Du Page, IL	
McHenry, IL	
Chico, CA	1.0550
Butte, CA	
*Cincinnati, OH-KY-IN	1.0236
Dearborn, IN	
Boone, KY	
Campbell, KY	
Kenton, KY	
Clermont, OH	
Hamilton, OH	
Warren, OH	
Clarksville-Hopkinsville, TN-KY	0.7269
Christian, KY	
Montgomery, TN	
*Cleveland, OH	1.0765
Cuyahoga, OH	
Geauga, OH	
Lake, OH	
Medina, OH	
Colorado Springs, CO	1.0256
El Paso, CO	
Columbia, MO	1.0378
Boone, MO	
Columbia, SC	0.8444
Lexington, SC	
Richland, SC	
Columbus, GA-AL	0.7347
Russell, AL	
Chattanoochee, GA	
Muscogee, GA	
*Columbus, OH	0.9472
Delaware, OH	
Fairfield, OH	
Franklin, OH	
Licking, OH	
Madison, OH	
Pickaway, OH	
Union, OH	
Corpus Christi, TX	0.8285
Nueces, TX	
San Patricio, TX	
Cumberland, MD-WV	0.9122
Allegany, MD	
Mineral, WV	
*Dallas, TX	1.0143
Collin, TX	
Dallas, TX	
Denton, TX	
Ellis, TX	
Kaufman, TX	
Rockwall, TX	
Danville, VA	0.7629
Danville City, VA	
Pittsylvania, VA	
Davenport-Rock Island-Moline, IA-IL	0.9446
Scott, IA	
Henry, IL	
Rock Island, IL	
Dayton-Springfield, OH	0.9918
Clark, OH	
Greene, OH	
Miami, OH	
Montgomery, OH	
Daytona Beach, FL	0.8487
Volusia, FL	
Decatur, AL	0.7086
Lawrence, AL	
Morgen, AL	
Decatur, IL	0.8903
Macon, IL	
*Denver, CO	1.1756
Adams, CO	
Arapahoe, CO	
Denver, CO	
Douglas, CO	
Jefferson, CO	
Des Moines, IA	0.9711
Dallas, IA	
Polk, IA	
Warren, IA	
*Detroit, MI	1.0784
Lapeer, MI	
Livingston, MI	
Macomb, MI	
Monroe, MI	
Oakland, MI	
Saint Clair, MI	
Wayne, MI	
Dothan, AL	0.7892
Dale, AL	
Houston, AL	
Dubuque, IA	0.9456
Dubuque, IA	
Duluth, MN-WI	0.9603
St. Louis, MN	
Douglas, WI	
Eau Claire, WI	0.8666
Chippewa, WI	
Eau Claire, WI	
El Paso, TX	0.8888
El Paso, TX	
Elkhart-Goshen, IN	0.9197
Elkhart, IN	
Elmira, NY	0.9134
Chemung, NY	
Enid, OK	0.9150
Garfield, OK	
Erie, PA	0.9568
Erie, PA	
Eugene-Springfield, OR	1.0199
Lane, OR	
Evansville, IN-KY	1.0302
Posey, IN	
Vanderburgh, IN	
Warrick, IN	
Henderson, KY	
Fargo-Moorhead, ND-MN	1.0040
Clay, MN	
Cass, ND	
Fayetteville, NC	0.8158
Cumberland, NC	
Fayetteville-Springdale, AR	0.7383
Washington, AR	
Flint, MI	1.1653
Genesee, MI	
Florence, AL	0.7090
Colbert, AL	
Lauderdale, AL	
Florence, SC	0.7704
Florence, SC	
Fort Collins-Loveland, CO	1.0292
Larimor, CO	
*Fort Lauderdale-Hollywood-Pompano Beach, FL	1.0258
Broward, FL	
Fort Myers-Cape Coral, FL	0.9003
Lee, FL	
Fort Pierce, FL	1.0400
Martin, FL	
St. Lucie, FL	
Fort Smith, AR-OK	0.8748
Crawford, AR	
Sebastian, AR	
Sequoyah, OK	
Fort Walton Beach, FL	0.8182
Okaloosa, FL	
Fort Wayne, IN	0.9008
Allen, IN	
De Kalb, IN	
Whitley, IN	
*Fort Worth-Arlington, TX	0.9544
Johnson, TX	
Parker, TX	
Tarrant, TX	
Fresno, CA	1.1137
Fresno, CA	
Gadsden, AL	0.8523
Etowah, AL	
Gainesville, FL	0.8728
Alachua, FL	
Bradford, FL	
Galveston-Texas City, TX	1.0820
Galveston, TX	
Gary-Hammond, IN	1.0493
Lake, IN	
Porter, IN	
Glens Falls, NY	0.8736
Warren, NY	
Washington, NY	
Grand Forks, ND	0.9628
Grand Forks, ND	
Grand Rapids, MI	1.0076
Kent, MI	
Ottawa, MI	
Great Falls, MT	0.9839
Cascade, MT	
Greeley, CO	1.0215
Weld, CO	
Green Bay, WI	0.9662
Brown, WI	
Greensboro-Winston-Salem-High Point, NC	0.8558
Davidson, NC	
Davie, NC	
Forsyth, NC	
Guilford, NC	
Randolph, NC	
Stokes, NC	
Yadkin, NC	
Greenville-Spartanburg, SC	0.9322
Greenville, SC	
Pickens, SC	
Spartanburg, SC	
Hagerstown, MD	0.8716
Washington, MD	
Hamilton-Middletown, OH	0.9681
Butler, OH	
Harrisburg-Lebanon-Carlisle, PA	1.0515
Cumberland, PA	
Dauphin, PA	
Lebanon, PA	
Perry, PA	
*Hartford-Middletown-New Britain-Bristol, CT	1.0995
Hartford, CT	
Litchfield, CT	
Middlesex, CT	
Tolland, CT	
Hickory, NC	0.8213

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Alexander, NC	
Burke, NC	
Catawba, NC	
Honolulu, HI	1.1365
Honolulu, HI	
Houma-Thibodaux, LA	0.7485
Lafourche, LA	
Terrebonne, LA	
*Houston, TX	0.9868
Fort Bend, TX	
Harris, TX	
Liberty, TX	
Montgomery, TX	
Waller, TX	
Huntington-Ashland, WV-KY-OH	0.9177
Boyd, KY	
Carter, KY	
Greenup, KY	
Lawrence, OH	
Cabell, WV	
Wayne, WV	
Huntsville, AL	0.8260
Madison, AL	
*Indianapolis, IN	0.9903
Boone, IN	
Hamilton, IN	
Hancock, IN	
Hendricks, IN	
Johnson, IN	
Marion, IN	
Morgan, IN	
Shelby, IN	
Iowa City, IA	1.0951
Johnson, IA	
Jackson, MI	0.9283
Jackson, MI	
Jackson, MS	0.8075
Hinds, MS	
Madison, MS	
Rankin, MS	
Jackson, TN	0.7560
Madison, TN	
Jacksonville, FL	0.8920
Clay, FL	
Duval, FL	
Nassau, FL	
St. Johns, FL	
Jacksonville, NC	0.7219
Onslow, NC	
Jamestown-Dunkirk, NY	0.7963
Chatauqua, NY	
Janesville-Beloit, WI	0.8999
Rock, WI	
Jersey City, NJ	1.0737
Hudson, NJ	
Johnson City-Kingsport-Bristol, TN-VA	0.8773
Carter, TN	
Hawkins, TN	
Sullivan, TN	
Unicoi, TN	
Washington, TN	
Bristol City, VA	
Scott, VA	
Washington, VA	
Johnstown, PA	0.9149
Cambria, PA	
Somerset, PA	
Joliet, IL	1.0421
Grundy, IL	
Will, IL	
Joplin, MO	0.8635
Jasper, MO	
Newton, MO	
Kalamazoo, MI	1.1089
Kalamazoo, MI	
Kankakee, IL	0.9024
Kankakee, IL	
*Kansas City, KS-MO	1.0093
Johnson, KS	
Leavenworth, KS	
Miami, KS	
Wyandotte, KS	
Cass, MO	
Clay, MO	
Jackson, Mo	
Lafayette, MO	
Platte, MO	
Ray, MO	
Kenosha, WI	1.0527
Kenosha, WI	
Killeen-Temple, TX	1.1227
Bell, TX	
Coryell, TX	
Knoxville, TN	0.8202
Anderson, TN	
Blount, TN	
Grainger, TN	
Jefferson, TN	
Knox, TN	
Sevier, TN	
Union, TN	
Kokomo, IN	0.9410
Howard, IN	
Tipton, IN	
LaCrosse, WI	0.9686
LaCrosse, WI	
Lafayette, LA	0.9003
Lafayette, LA	
St. Martin, LA	
Lafayette, IN	0.8843
Tippecanoe, IN	
Lake Charles, LA	0.8900
Calcasieu, LA	
Lake County, IL	1.0854
Lake, IL	
Lakeland-Winter Haven, FL	0.8189
Polk, FL	
Lancaster, PA	0.9943
Lancaster, PA	
Lansing-East Lansing, MI	1.0360
Clinton, MI	
Eaton, MI	
Ingham, MI	
Laredo, TX	0.7360
Webb, TX	
Las Cruces, NM	0.8469
Dona Ana, NM	
Las Vegas, NV	1.1147
Clark, NV	
Lawrence, KS	0.9910
Douglas, KS	
Lawton, OK	0.8523
Comanche, OK	
Lewiston-Auburn, ME	0.9192
Androscoggin, ME	
Lexington-Fayette, KY	0.9160
Bourbon, KY	
Clark, KY	
Fayette, KY	
Jessamine, KY	
Scott, KY	
Woodford, KY	
Lima, OH	0.9178
Allen, OH	
Auglaize, OH	
Lincoln, NE	0.9429
Lancaster, NE	
Little Rock-North Little Rock, AR	0.9240
Faulkner, AR	
Lonoke, AR	
Pulaski, AR	
Saline, AR	
Longview-Marshall, TX	0.8154
Gregg, TX	
Harrison, TX	
Lorain-Elyria, OH	0.9362
Lorain, OH	
*Los Angeles-Long Beach, CA	1.2413
Los Angeles, CA	
Louisville, KY-IN	0.9547
Clark, IN	
Floyd, IN	
Harrison, IN	
Bullitt, KY	
Jefferson, KY	
Oldham, KY	
Shelby, KY	
Lubbock, TX	0.9714
Lubbock, TX	
Lynchburg, VA	0.8498
Amherst, VA	
Campbell, VA	
Lynchburg City, VA	
Macon-Warner Robins, GA	0.7803
Bibb, GA	
Houston, GA	
Jones, GA	
Peach, GA	
Madison, WI	1.0072
Dane, WI1	
Manchester-Nashua, NH	0.9386
Hillsborough, NH	
Merrimack, NH	
Mansfield, OH	0.8896
Richland, OH	
Mayaguez, PR	0.4808
Anasco, PR	
Cabo Rojo, PR	
Hormigueros, PR	
Mayaguez, PR	
San German, PR	
McAllen-Edinburg-Mission, TX	0.7679
Hidalgo, TX	
Medford, OR	0.9653
Jackson, OR	
Melbourne-Titusville, FL	0.8894
Brevard, FL	
Memphis, TN-AR-MS	0.9412
Crittenden, AR	
De Soto, MS	
Shelby, TN	
Tipton, TN	
Merced, CA	1.0054
Merced, CA	
*Miami-Hialeah, FL	1.0225
Dade, FL	
Middlesex-Somerset-Hunterdon, NJ	0.9929
Hunterdon, NJ	
Middlesex, NJ	
Somerset, NJ	
Midland, TX	1.0511
Midland, TX	
*Milwaukee, WI	1.0132
Milwaukee, WI	
Ozaukee, WI	
Washington, WI	
Waukesha, WI	
*Minneapolis-St. Paul, MN-WI	1.1345

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Anoka, MN	
Carver, MN	
Chisago, MN	
Dakota, MN	
Hennepin, MN	
Isanti, MN	
Ramsey, MN	
Scott, MN	
Washington, MN	
Wright, MN	
St. Croix, WI	
Mobile, AL	0.8234
Baldwin, AL	
Mobile, AL	
Modesto, CA	1.0699
Stanislaus, CA	
Monmouth-Ocean, NJ	0.9387
Monmouth, NJ	
Ocean, NJ	
Monroe, LA	0.8150
Ouachita, LA	
Montgomery, AL	0.8039
Autauga, AL	
Elmore, AL	
Montgomery, AL	
Muncie, IN	0.9652
Delaware, IN	
Muskegon, MI	0.9904
Muskegon, MI	
Naples, FL	1.0000
Collier, FL	
Nashville, TN	0.8893
Cheatham, TN	
Davidson, TN	
Dickson, TN	
Robertson, TN	
Rutherford, TN	
Sumner, TN	
Williamson, TN	
Wilson, TN	
*Nassua-Suffolk, NY	1.2107
Nassau, NY	
Suffolk, NY	
New Bedford-Fall River-Attleboro, MA	0.9479
Bristol, MA	
New Haven-Waterbury-Meriden, CT	1.0768
New Haven, CT	
New London-Norwich, CT	1.0669
New London, CT	
*New Orleans, LA	0.9352
Jefferson, LA	
Orleans, LA	
St. Bernard, LA	
St. Charles , LA	
St. John The Baptist, LA	
St. Tammany, LA	
*New York, NY	1.3183
Bronx, NY	
Kings, NY	
New York City, NY	
Putnam, NY	
Queens, NY	
Richmond, NY	
Rockland, NY	
Westchester, NY	
*Newark, NJ	1.0879
Essex, NJ	
Morris, NJ	
Sussex, NJ	
Union, NJ	
Niagara Falls, NY	0.8546
Niagara, NY	
*Norfolk-Virginia Beach-Newport News, VA	0.9267

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Chesapeake City, VA	
Gloucester, VA	
Hampton City, VA	
James City Co., VA	
Newport News City, VA	
Norfolk City, VA	
Poquoson, VA	
Portsmouth City, VA	
Suffolk City, VA	
Virginia Beach City, VA	
Williamsburg City, VA	
York, VA	
*Oakland, CA	1.4029
Alameda, CA	
Contra Costa, CA	
Ocala, FL	0.8143
Marion, FL	
Odessa, TX	0.9275
Ector, TX	
Oklahoma City, OK	0.9862
Canadian, OK	
Cleveland, OK	
Logan, OK	
McClain, OK	
Oklahoma, OK	
Pottawatomie, OK	
Olympia, WA	1.0540
Thurston, WA	
Omaha, NE-IA	0.9736
Pottawattamie, IA	
Douglas, NE	
Sarpy, NE	
Washington, NE	
Orange County, NY	0.8900
Orange, NY	
Orlando, FL	0.9124
Orange, FL	
Osceola, FL	
Seminole, FL	
Owensboro, KY	0.8951
Daviess, KY	
Oxnard-Ventura, CA	1.3901
Ventura, CA	
Panama City, FL	0.7900
Bay, FL	
Parkersburg-Marietta, WV-OH	0.9065
Washington, OH	
Wood, WV	
Pascagoula, MS	0.8749
Jackson, MS	
Pensacola, FL	0.8251
Escambia, FL	
Santa Rosa, FL	
Peoria, IL	0.9794
Peoria, IL	
Tazewell, IL	
Woodford, IL	
*Philadelphia, PA-NJ	1.0774
Burlington, NJ	
Camden, NJ	
Gloucester, NJ	
Bucks, PA	
Chester, PA	
Delaware, PA	
Montgomery, PA	
Philadelphia, PA	
*Phoenix, AZ	1.0016
Maricopa, AZ	
Pine Bluff, AR	0.7991
Jefferson, AR	
*Pittsburgh, PA	1.0107

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Allegheny, PA	
Fayette, PA	
Washington, PA	
Westmoreland, PA	
Pittsfield, MA	1.0241
Berkshire, MA	
Ponce, PR	0.5473
Juana Diaz, PR	
Ponce, PR	
Portland, ME	0.9618
Cumberland, ME	
Sagadahoc, ME	
York, ME	
*Portland, OR	1.1215
Clackamas, OR	
Multnomah, OR	
Washington, OR	
Yamhill, OR	
Portsmouth-Dover-Rochester, NH	0.9399
Rockingham, NH	
Strafford, NH	
Poughkeepsie, NY	0.9728
Dutchess, NY	
*Providence-Pawtucket-Woonsocket, RI	0.9735
Bristol, RI	
Kent, RI	
Newport, RI	
Providence, RI	
Washington, RI	
Provo-Orem, UT	0.9275
Utah, UT	
Pueblo, CO	0.9295
Pueblo, CO	
Racine, WI	0.9183
Racine, WI	
Raleigh-Durham, NC	0.9395
Durham, NC	
Franklin, NC	
Orange, NC	
Wake, NC	
Rapid City, SD	0.8526
Pennington, SD	
Reading, PA	0.9118
Berks, PA	
Redding, CA	0.9901
Shasta, CA	
Reno, NV	1.1257
Washoe, NV	
Richland-Kennewick, WA	0.9720
Benton, WA	
Franklin, WA	
Richmond-Petersburg, VA	0.8864
Charles City Co., VA	
Chesterfield, VA	
Colonial Heights City, VA	
Dinwiddie, VA	
Goochland, VA	
Hanover, VA	
Henrico, VA	
Hopewell City, VA	
New Kent, VA	
Petersburg City, VA	
Powhatan, VA	
Prince George, VA	
Richmond City, VA	
*Riverside-San Bernardino, CA	1.1291
Riverside, CA	
San Bernardino, CA	
Roanoke, VA	0.8224
Botetourt, VA	
Roanoke, VA	
Roanoke City, VA	
Salem City, VA	
Rochester, MN	1.0539

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Olmsted, MN	
Rochester, NY	0.9490
Livingston, NY	
Monroe, NY	
Ontario, NY	
Orleans, NY	
Wayne, NY	
Rockford, IL	0.9806
Boone, IL	
Winnebago, IL	
*Sacramento, CA	1.2072
Eldorado, CA	
Placer, CA	
Sacramento, CA	
Yolo, CA	
Saginaw-Bay City-Midland, MI	1.0769
Bay, MI	
Midland, MI	
Saginaw, MI	
St. Cloud, MN	0.9690
Benton, MN	
Sherburne, MN	
Stearns, MN	
St. Joseph, MO	0.8691
Buchanan, MO	
*St. Louis, MO-IL	1.0126
Clinton, IL	
Jersey, IL	
Madison, IL	
Monroe, IL	
St. Clair, IL	
Franklin, MO	
Jefferson, MO	
St. Charles, MO	
St. Louis, MO	
St. Louis City, MO	
Salem, OR	1.0503
Marion, OR	
Polk, OR	
Salinas-Seaside-Monterey, CA	1.2582
Monterey, CA	
*Salt Lake City-Ogden, UT	0.9271
Davis, UT	
Salt Lake, UT	
Weber, UT	
San Angelo, TX	0.8395
Tom Green, TX	
*San Antonio, TX	0.8334
Bexar, TX	
Comal, TX	
Guadalupe, TX	
*San Diego, CA	1.2359
San Diego, CA	
*San Francisco, CA	1.4350
Marin, CA	
San Francisco, CA	
San Mateo, CA	
*San Jose, CA	1.4702
Santa Clara, CA	
*San Juan, PR	0.5363
Barcelona, PR	
Bayoman, PR	
Canovanas, PR	
Carolina, PR	
Catano, PR	
Corozal, PR	
Dorado, PR	
Fajardo, PR	
Florida, PR	
Guaynabo, PR	
Humacao, PR	
Juncos, PR	
Los Piedras, PR	
Loiza, PR	
Luguillo, PR	
Manati, PR	
Naranjito, PR	
Rio Grande, PR	
San Juan, PR	
Toa Alta, PR	
Toa Baja, PR	
Trojillo Alto, PR	
Vega Alta, PR	
Vega Baja, PR	
Santa Barbara-Santa Maria-Lompoc, CA	1.1722
Santa Barbara, CA	
Santa Cruz, CA	1.2325
Santa Cruz, CA	
Santa Fe, NM	0.9488
Los Alamos, NM	
Santa Fe, NM	
Santa Rosa-Petaluma, CA	1.4191
Sonoma, CA	
Sarasota, FL	0.9255
Sarasota, FL	
Savannah, GA	0.8415
Chatham, GA	
Effingham, GA	
Scranton-Wilkes Barre, PA	0.9240
Columbia, PA	
Lackawanna, PA	
Luzerne, PA	
Monroe, PA	
Wyoming, PA	
*Seattle, WA	1.0901
King, WA	
Snohomish, WA	
Sharon, PA	0.9209
Mercer, PA	
Sheboygan, WI	0.9329
Sheboygan, WI	
Sherman-Denison, TX	0.8911
Grayson, TX	
Shreveport, LA	0.8936
Bossier, LA	
Caddo, LA	
Sioux City, IA-NE	0.9026
Woodbury, IA	
Dakota, NE	
Sioux Falls, SD	0.9492
Minnehaha, SD	
South Bend-Mishawaka, IN	0.9712
St. Joseph, IN	
Spokane, WA	1.0764
Spokane, WA	
Springfield, IL	1.0040
Menard, IL	
Sangamon, IL	
Springfield, MO	0.8866
Christian, MO	
Greene, MO	
Springfield, MA	1.0040
Hampden, MA	
Hampshire, MA	
State College, PA	1.0463
Centre, PA	
Steubenville-Weirton, OH-WV	0.9122
Jefferson, OH	
Brooke, WV	
Hancock, WV	
Stockton, CA	1.1373
San Joaquin, CA	
Syracuse, NY	0.9760
Madison, NY	
Onondaga, NY	
Oswego, NY	
Tacoma, WA	1.0247
Pierce, WA	
Tallahassee, FL	0.8115
Gadsden, FL	
Leon, FL	
*Tampa-St. Petersburg-Clearwater, FL	0.8996
Hernando, FL	
Hillsborough, FL	
Pasco, FL	
Pinellas, FL	
Terre Haute, IN	0.8218
Clay, IN	
Vigo, IN	
Texarkana-TX-Texarkana, AR	0.8028
Miller, AR	
Bowie, TX	
Toledo, OH	1.0659
Fulton, OH	
Lucas, OH	
Wood, OH	
Topeka, KS	0.9901
Shawnee, KS	
Trenton, NJ	1.0310
Mercer, NJ	
Tucson, AZ	0.9777
Pima, AZ	
Tulsa, OK	0.9238
Creeks, OK	
Osage, OK	
Rogers, OK	
Tulsa, OK	
Wagoner, OK	
Tuscaloosa, AL	0.9423
Tuscaloosa, AL	
Tyler, TX	0.9239
Smith, TX	
Utica-Rome, NY	0.8101
Herkimer, NY	
Oneida, NY	
Vallejo-Fairfield-Napa, CA	1.2273
Napa, CA	
Solano, CA	
Vancouver, WA	1.0570
Clark, WA	
Victoria, TX	0.8249
Victoria, TX	
Vineland-Millville-Bridgeton, NJ	0.9808
Cumberland, NJ	
Visalia-Tulare-Porterville, CA	1.2797
Tulare, CA	
Waco, TX	0.8588
McLennan, TX	
*Washington, DC-MD-VA	1.0827
District of Columbia, DC	

TABLE 4A.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Calvert, MD	
Charles, MD	
Frederick, MD	
Montgomery, MD	
Prince Georges, MD	
Alexandria City, VA	
Arlington, VA	
Fairfax, VA	
Fairfax City, VA	
Falls Church City, VA	
Loudoun, VA	
Manassas City, VA	
Manassas Park City, VA	
Prince William, VA	
Stafford, VA	
Waterloo-Cedar Falls, IA	0.9456
Black Hawk, IA	
Bremer, IA	
Wausau, WI	0.9618
Marathon, WI	
West Palm Beach-Boca Raton-Delray Beach, FL	0.9472
Palm Beach, FL	
Wheeling, WV-OH	0.8554
Belmont, OH	
Marshall, WV	
Ohio, WV	
Wichita, KS	1.0226
Butler, KS	
Harvey, KS	
Sedgwick, KS	
Wichita Falls, TX	0.8316
Wichita, TX	
Williamsport, PA	0.9086
Lycoming, PA	
Wilmington, DE-NJ-MD	1.0279
New Castle, DE	
Cecil, MD	
Salem, NJ	
Wilmington, NC	0.8179
New Hanover, NC	
Worcester-Fitchburg-Leominster, MA	0.9417
Worchester, MA	
Yakima, WA	0.9915
Yakima, WA	
York, PA	0.9403
Adams, PA	
York, PA	
Youngstown-Warren, OH	1.0016
Mahoning, OH	
Trumbull, OH	
Yuba City, CA	1.0090
Sutter, CA	
Yuba, CA	

TABLE 4B.—WAGE INDEX FOR RURAL AREAS

Nonurban area	Wage index
Alabama	0.6963
Alaska	1.3734
Arizona	0.8782
Arkansas	0.7071
California	1.0137
Colorado	0.8554
Connecticut	1.0175
Delaware	0.8332
Florida	0.8147
Georgia	0.7446
Hawaii	0.8840
Idaho	0.8568
Illinois	0.7994
Indiana	0.8033
Iowa	0.7933
Kansas	0.7908
Kentucky	0.7938
Louisiana	0.7584
Maine	0.8233
Maryland	0.7966
Massachusetts	1.0135
Michigan	0.9110
Minnesota	0.8929
Mississippi	0.7176
Missouri	0.7461
Montana	0.8499
Nebraska	0.7680
Nevada	0.9473
New Hampshire	0.8872
New Jersey [1]	
New Mexico	0.8049
New York	0.8069
North Carolina	0.7639
North Dakota	0.8395
Ohio	0.8650
Oklahoma	0.7908
Oregon	0.9908
Pennsylvania	0.8760
Puerto Rico	0.5371
Rhode Island [1]	
South Carolina	0.7192
South Dakota	0.7557
Tennessee	0.7043
Texas	0.7609
Utah	0.8613
Vermont	0.8400
Virginia	0.7868
Washington	0.9916
West Virginia	0.8499
Wisconsin	0.8454
Wyoming	0.9025

[1] All counties within the State are classified urban.

TABLE 4C.—WAGE INDEX FOR RURAL COUNTIES WHOSE HOSPITALS ARE DEEMED URBAN

[Area that qualify as large urban areas are designated with an asterisk]

County	Urban area	Wage index
Limestone, AL	Huntsville, AL	0.7455
Marshall, AL	Huntsville, AL	0.7207
Charlotte, FL	Sarasota, FL	0.8311
Indian River, FL	Fort Pierce, FL	0.8613
Christian, IL	Springfield, IL	0.7895
Macoupin, IL	*St. Louis, MO-IL	0.7592
Mason, IL	Peoria, IL	0.7364
Clinton, IN	Lafayette, IN	0.8095
Henry, IN	Anderson, IN	0.8411
Owen, IN [1]	Bloomington, IN	
Jefferson, KS	Topeka, KS	0.6041
Allegan, MI	Grand Rapids, MI	1.0075
Barry, MI	Battle Creek, MI	0.8337
Cass, MI	Benton Harbor, MI	0.7956
Ionia, MI	Lansing-East Lansing, MI.	0.8386
Lenawee, MI	Ann Arbor, MI	1.0242
Shiawassee, MI	Flint, MI	1.0236
Tuscola, MI	Saginaw-Bay City-Midland, MI.	0.9020
Van Buren, MI	Kalamazoo, MI	0.8610
Clinton, MO	*Kansas City, KS-MO.	0.6306
Cass, NE [1]	Omaha, NE	
Caswell, NC [1]	Danville, VA	
Currituck, NC [1]	*Norfolk-Virginia Beach-Newport News, VA.	
Harnett, NC	Fayetteville, NC	0.7497
Genesee, NY	Rochester, NY	0.7175
Columbiana, OH	Beaver County, PA	0.9089
Morrow, OH	Mansfield, OH	0.6742
Preble, OH [1]	Dayton-Springfield, OH.	
Van Wert, OH	Lima, OH	0.8375
Lawrence, PA	Beaver County, PA	0.8469
Cherokee, SC	Greenville-Spartanburg, SC.	0.7244
Bedford, VA	Roanoke, VA	0.7261
Fredericksburg City, VA.	*Washington, DC-MD-VA.	0.8232
Isle of Wight, VA [1]	Norfolk-Virginia Beach-Newport News, VA.	
Spotsylvania, VA [1]	*Washington, DC-MD-VA.	
Jefferson, WI	*Milwaukee, WI	0.8740
Walworth, WI	*Milwaukee, WI	0.9475
Jefferson, WV	*Washington, DC-MD-VA.	0.6886
Lincoln, WV [1]	Charleston, WV	

[1] There are no prospective payment hospitals in these counties.

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TABLE 5

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
1	01	SURG	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.5670	13.8	42
2	01	SURG	CRANIOTOMY FOR TRAUMA AGE >17	4.1379	12.8	41
3	01	SURG	CRANIOTOMY AGE 0-17	2.8830	12.7	41
4	01	SURG	SPINAL PROCEDURES	2.6483	11.8	40
5	01	SURG	EXTRACRANIAL VASCULAR PROCEDURES	1.5214	6.1	34
6	01	SURG	CARPAL TUNNEL RELEASE	.4709	2.0	17
7	01	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC WITH CC	3.1110	13.2	41
8	01	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC W/O CC	.7355	3.2	31
9	01	MED	SPINAL DISORDERS & INJURIES	1.4058	7.0	35
10	01	MED	NERVOUS SYSTEM NEOPLASMS WITH CC	1.2449	7.8	36
11	01	MED	NERVOUS SYSTEM NEOPLASMS W/O CC	.7451	4.7	33
12	01	MED	DEGENERATIVE NERVOUS SYSTEM DISORDERS	.9391	6.9	35
13	01	MED	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA	.8699	7.0	35
14	01	MED	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.2260	7.4	35
15	01	MED	TRANSIENT ISCHEMIC ATTACK & PRECEREBRAL OCCLUSIONS	.6350	4.2	32
16	01	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W CC	1.0949	6.8	35
17	01	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC	.6452	4.6	33
18	01	MED	CRANIAL & PERIPHERAL NERVE DISORDERS WITH CC	.9640	6.3	34
19	01	MED	CRANIAL & PERIPHERAL NERVE DISORDERS W/O CC	.5869	4.1	32
20	01	MED	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	1.7817	8.1	36
21	01	MED	VIRAL MENINGITIS	1.4190	7.6	36
22	01	MED	HYPERTENSIVE ENCEPHALOPATHY	.6981	4.4	32
23	01	MED	NONTRAUMATIC STUPOR & COMA	.8698	4.4	32
24	01	MED	SEIZURE & HEADACHE AGE >17 WITH CC	.9669	5.4	33
25	01	MED	SEIZURE & HEADACHE AGE >17 W/O CC	.5270	3.6	29
26	01	MED	SEIZURE & HEADACHE AGE 0-17	.7313	3.5	31
27	01	MED	TRAUMATIC STUPOR & COMA, COMA >1 HR	1.6124	4.6	33
28	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 WITH CC	1.2750	6.1	34
29	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 W/O CC	.5730	3.4	31
30	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE 0-17	.3496	2.0	17
31	01	MED	CONCUSSION AGE >17 WITH CC	.7007	4.3	32
32	01	MED	CONCUSSION AGE >17 W/O CC	.4038	2.7	25
33	01	MED	CONCUSSION AGE 0-17	.2427	1.6	9
34	01	MED	OTHER DISORDERS OF NERVOUS SYSTEM WITH CC	1.2069	6.0	34
35	01	MED	OTHER DISORDERS OF NERVOUS SYSTEM W/O CC	.5597	3.7	32

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
36	02	SURG	RETINAL PROCEDURES	.6443	2.6	14
37	02	SURG	ORBITAL PROCEDURES	.7415	3.1	31
38	02	SURG	PRIMARY IRIS PROCEDURES	.3550	2.1	16
39	02	SURG	LENS PROCEDURES WITH OR WITHOUT VITRECTOMY	.4494	1.7	7
40	02	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	.4762	2.0	20
41	02	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	.3613	1.6	7
42	02	SURG	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS & LENS	.6305	2.8	16
43	02	MED	HYPHEMA	.3350	3.7	24
44	02	MED	ACUTE MAJOR EYE INFECTIONS	.6035	5.5	33
45	02	MED	NEUROLOGICAL EYE DISORDERS	.5454	3.3	30
46	02	MED	OTHER DISORDERS OF THE EYE AGE >17 W CC	.6495	4.0	32
47	02	MED	OTHER DISORDERS OF THE EYE AGE >17 W/O CC	.3539	2.6	28
48	02	MED	OTHER DISORDERS OF THE EYE AGE 0-17	.3969	2.9	30
49	03	SURG	MAJOR HEAD & NECK PROCEDURES	2.8633	11.0	39
50	03	SURG	SIALOADENECTOMY	.6298	2.3	15
51	03	SURG	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	.5647	2.1	18
52	03	SURG	CLEFT LIP & PALATE REPAIR	.8129	2.7	26
53	03	SURG	SINUS & MASTOID PROCEDURES AGE >17	.6161	2.0	20
54	03	SURG	SINUS & MASTOID PROCEDURES AGE 0-17	.6806	3.2	22
55	03	SURG	MISCELLANEOUS EAR, NOSE, MOUTH & THROAT PROCEDURES	.4879	1.7	14
56	03	SURG	RHINOPLASTY	.4881	1.8	14
57	03	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	.9313	3.5	32
58	03	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	.3060	1.5	4
59	03	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	.3878	1.6	11
60	03	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	.2584	1.5	4
61	03	SURG	MYRINGOTOMY W TUBE INSERTION AGE >17	.6945	2.3	30
62	03	SURG	MYRINGOTOMY W TUBE INSERTION AGE 0-17	.3052	1.3	5
63	03	SURG	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES	1.1882	4.3	32
64	03	MED	EAR, NOSE, MOUTH & THROAT MALIGNANCY	1.1762	5.1	33
65	03	MED	DYSEQUILIBRIUM	.4564	3.4	23
66	03	MED	EPISTAXIS	.4496	3.3	24
67	03	MED	EPIGLOTTITIS	.8589	4.4	32
68	03	MED	OTITIS MEDIA & URI AGE >17 WITH CC	.7232	5.0	33
69	03	MED	OTITIS MEDIA & URI AGE >17 W/O CC	.5281	3.9	25
70	03	MED	OTITIS MEDIA & URI AGE 0-17	.4589	3.3	22

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
71	03	MED	LARYNGOTRACHEITIS	.7307	4.5	32
72	03	MED	NASAL TRAUMA & DEFORMITY	.5528	3.3	31
73	03	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE >17	.7525	4.0	32
74	03	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE 0-17	.3386	2.1	20
75	04	SURG	MAJOR CHEST PROCEDURES	2.9603	11.9	40
76	04	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W CC	2.3038	10.5	38
77	04	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W/O CC	1.0895	4.9	33
78	04	MED	PULMONARY EMBOLISM	1.4320	8.8	37
79	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 WITH CC	1.8530	9.4	37
80	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 W/O CC	1.1382	7.1	35
81	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE 0-17	1.0899	6.1	34
82	04	MED	RESPIRATORY NEOPLASMS	1.2016	6.6	35
83	04	MED	MAJOR CHEST TRAUMA WITH CC	1.0064	6.5	35
84	04	MED	MAJOR CHEST TRAUMA W/O CC	.5009	3.9	32
85	04	MED	PLEURAL EFFUSION WITH CC	1.1437	6.8	35
86	04	MED	PLEURAL EFFUSION W/O CC	.7223	4.6	33
87	04	MED	PULMONARY EDEMA & RESPIRATORY FAILURE	1.4597	6.1	34
88	04	MED	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1.0153	6.1	34
89	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 WITH CC	1.2059	7.2	35
90	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 W/O CC	.7790	5.7	32
91	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE 0-17	.7465	4.6	30
92	04	MED	INTERSTITIAL LUNG DISEASE WITH CC	1.2182	6.9	35
93	04	MED	INTERSTITIAL LUNG DISEASE W/O CC	.7936	5.2	33
94	04	MED	PNEUMOTHORAX WITH CC	1.3378	7.4	35
95	04	MED	PNEUMOTHORAX W/O CC	.6565	4.8	33
96	04	MED	BRONCHITIS & ASTHMA AGE >17 WITH CC	.9734	6.0	34
97	04	MED	BRONCHITIS & ASTHMA AGE >17 W/O CC	.6810	4.7	27
98	04	MED	BRONCHITIS & ASTHMA AGE 0-17	.8942	5.2	34
99	04	MED	RESPIRATORY SIGNS & SYMPTOMS WITH CC	.8493	4.4	32
100	04	MED	RESPIRATORY SIGNS & SYMPTOMS W/O CC	.5125	2.8	20
101	04	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES WITH CC	.9966	5.3	33
102	04	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES W/O CC	.5593	3.4	31
103	05	SURG	HEART TRANSPLANT	13.2352	26.4	54
104	05	SURG	CARDIAC VALVE PROCEDURE W PUMP & W CARDIAC CATH	7.8432	18.4	46
105	05	SURG	CARDIAC VALVE PROCEDURE W PUMP & W/O CARDIAC CATH	5.9965	13.2	41

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** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
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LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
106	05	SURG	CORONARY BYPASS W CARDIAC CATH	5.6558	14.2	42
107	05	SURG	CORONARY BYPASS W/O CARDIAC CATH	4.2260	10.8	39
108	05	SURG	OTHER CARDIOTHORACIC OR VASCULAR PROCEDURES, W PUMP	5.7332	11.5	39
109	05	SURG	OTHER CARDIOTHORACIC PROCEDURES W/O PUMP	3.7746	7.5	36
110	05	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROC W/O PUMP WITH CC	3.5967	12.3	40
111	05	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROC W/O PUMP W/O CC	2.0351	8.3	36
112	05	SURG	VASCULAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION W/O PUMP	1.9106	5.3	33
113	05	SURG	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB & TOE	2.4616	14.3	42
114	05	SURG	UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	1.6119	9.8	38
115	05	SURG	PERM CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK	3.8541	12.6	41
116	05	SURG	PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK	2.5793	6.1	34
117	05	SURG	CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT	1.8867	4.8	33
118	05	SURG	CARDIAC PACEMAKER DEVICE REPLACEMENT	2.0267	3.9	32
119	05	SURG	VEIN LIGATION & STRIPPING	.8269	3.7	32
120	05	SURG	OTHER CIRCULATORY SYSTEM O.R. PROCEDURES	2.7059	10.8	39
121	05	MED	CIRCULATORY DISORDERS W AMI & C.V. COMP DISCH ALIVE	1.6228	8.6	37
122	05	MED	CIRCULATORY DISORDERS W AMI W/O C.V. COMP DISCH ALIVE	1.1233	6.2	34
123	05	MED	CIRCULATORY DISORDERS W AMI, EXPIRED	1.3934	3.0	31
124	05	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH & COMPLEX DIAG	1.1876	4.5	32
125	05	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O COMPLEX DIAG	.6874	2.3	20
126	05	MED	ACUTE & SUBACUTE ENDOCARDITIS	2.9894	16.8	45
127	05	MED	HEART FAILURE & SHOCK	1.0169	6.2	34
128	05	MED	DEEP VEIN THROMBOPHLEBITIS	.8129	7.8	35
129	05	MED	CARDIAC ARREST, UNEXPLAINED	1.3986	2.7	31
130	05	MED	PERIPHERAL VASCULAR DISORDERS WITH CC	.8921	5.9	34
131	05	MED	PERIPHERAL VASCULAR DISORDERS W/O CC	.5814	4.2	32
132	05	MED	ATHEROSCLEROSIS WITH CC	.7565	4.8	32
133	05	MED	ATHEROSCLEROSIS W/O CC	.5420	3.2	27
134	05	MED	HYPERTENSION	.5964	4.3	32
135	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE > 17 WITH CC	.9018	5.1	33
136	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE > 17 W/O CC	.5488	3.4	29
137	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE 0-17	.6239	3.8	31
138	05	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS WITH CC	.8707	4.8	33
139	05	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC	.5715	3.4	26
140	05	MED	ANGINA PECTORIS	.6387	3.9	25

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LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
141	05	MED	SYNCOPE & COLLAPSE WITH CC	.6920	4.5	32
142	05	MED	SYNCOPE & COLLAPSE W/O CC	.5149	3.3	23
143	05	MED	CHEST PAIN	.5226	2.9	19
144	05	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W CC	1.1035	5.6	34
145	05	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC	.6236	3.5	31
146	06	SURG	RECTAL RESECTION WITH CC	2.7386	13.8	42
147	06	SURG	RECTAL RESECTION W/O CC	1.7349	9.9	37
148	06	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES WITH CC	3.2705	14.3	42
149	06	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.6636	9.9	32
150	06	SURG	PERITONEAL ADHESIOLYSIS WITH CC	2.6617	12.4	40
151	06	SURG	PERITONEAL ADHESIOLYSIS W/O CC	1.3478	8.0	36
152	06	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES WITH CC	1.4678	7.7	36
153	06	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.0149	6.5	34
154	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE > 17 WITH CC	3.8172	13.0	41
155	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE > 17 W/O CC	1.6050	8.0	36
156	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE 0-17	.8281	6.0	34
157	06	SURG	ANAL & STOMAL PROCEDURES WITH CC	.9571	5.4	33
158	06	SURG	ANAL & STOMAL PROCEDURES W/O CC	.5136	2.9	23
159	06	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 WITH CC	1.1057	5.5	33
160	06	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 W/O CC	.6314	3.3	23
161	06	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 WITH CC	.7337	3.5	32
162	06	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 W/O CC	.4485	2.1	14
163	06	SURG	HERNIA PROCEDURES AGE 0-17	.7729	3.5	26
164	06	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG WITH CC	2.3737	10.8	39
165	06	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC	1.3377	7.6	26
166	06	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG WITH CC	1.3991	6.8	35
167	06	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W/O CC	.7922	4.4	17
168	03	SURG	MOUTH PROCEDURES WITH CC	1.0050	3.7	32
169	03	SURG	MOUTH PROCEDURES W/O CC	.5463	2.2	19
170	06	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES WITH CC	2.8091	11.4	39
171	06	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC	1.2563	6.1	34
172	06	MED	DIGESTIVE MALIGNANCY WITH CC	1.2216	7.1	35
173	06	MED	DIGESTIVE MALIGNANCY W/O CC	.6657	4.0	32
174	06	MED	G.I. HEMORRHAGE WITH CC	.9620	5.5	34
175	06	MED	G.I. HEMORRHAGE W/O CC	.5983	4.1	25

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TABLE 5

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
176	06	MED	COMPLICATED PEPTIC ULCER	.9831	6.0	34
177	06	MED	UNCOMPLICATED PEPTIC ULCER WITH CC	.7637	5.3	32
178	06	MED	UNCOMPLICATED PEPTIC ULCER W/O CC	.5650	4.1	28
179	06	MED	INFLAMMATORY BOWEL DISEASE	1.0648	7.2	35
180	06	MED	G.I. OBSTRUCTION WITH CC	.9134	5.8	34
181	06	MED	G.I. OBSTRUCTION W/O CC	.5229	4.1	28
182	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 WITH CC	.7414	4.9	33
183	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 W/O CC	.5215	3.6	26
184	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE 0-17	.5408	3.1	31
185	03	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE >17	.7627	4.2	32
186	03	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE 0-17	.4062	2.9	23
187	03	MED	DENTAL EXTRACTIONS & RESTORATIONS	.4856	2.2	20
188	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 WITH CC	.9730	5.2	33
189	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 W/O CC	.4767	2.9	31
190	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	.7671	4.3	32
191	07	SURG	PANCREAS, LIVER & SHUNT PROCEDURES WITH CC.	5.0674	16.9	45
192	07	SURG	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC	2.1816	9.9	38
193	07	SURG	BILIARY TRACT PROC W CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E	3.0026	14.6	43
194	07	SURG	BILIARY TRACT PROC W/O CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E	1.7802	10.4	38
195	07	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. WITH CC	2.2810	11.5	40
196	07	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. W/O CC	1.5106	8.9	30
197	07	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. WITH CC	1.7378	8.8	37
198	07	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. W/O CC	.9865	6.0	21
199	07	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.2585	12.0	40
200	07	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.7160	9.7	38
201	07	SURG	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES	2.4093	8.9	37
202	07	MED	CIRRHOSIS & ALCOHOLIC HEPATITIS	1.1953	7.2	35
203	07	MED	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS	1.1174	6.7	35
204	07	MED	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	1.0387	6.1	34
205	07	MED	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA WITH CC	1.2068	6.8	35
206	07	MED	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W/O CC	.6124	3.7	32
207	07	MED	DISORDERS OF THE BILIARY TRACT WITH CC	.9566	5.6	34
208	07	MED	DISORDERS OF THE BILIARY TRACT W/O CC	.5658	3.5	29
209	08	SURG	MAJOR JOINT & LIMB REATTACHMENT PROCEDURES	2.8497	11.2	39
210	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 WITH CC	2.0536	12.7	41

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TABLE 5

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
211	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 W/O CC	1.4716	10.1	38
212	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	1.4023	7.3	31
213	08	SURG	AMPUTATION FOR MUSCULOSKELETAL SYSTEM & CONN TISSUE DISORDERS	1.7701	9.9	38
214	08	SURG	BACK & NECK PROCEDURES WITH CC	1.9997	11.1	39
215	08	SURG	BACK & NECK PROCEDURES W/O CC	1.2155	7.5	35
216	08	SURG	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	1.7852	9.2	37
217	08	SURG	WND DEBRID & SKN GRFT EXCEPT HAND,FOR MUSCSKELET & CONN TISS DIS	3.0640	14.0	42
218	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE >17 WITH CC	1.5359	8.2	36
219	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE >17 W/O CC	.9863	5.2	33
220	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE 0-17	.9130	5.3	33
221	08	SURG	KNEE PROCEDURES WITH CC	1.5409	6.9	35
222	08	SURG	KNEE PROCEDURES W/O CC	.8855	3.7	32
223	08	SURG	MAJOR SHOULDER/ELBOW PROC, OR OTHER UPPER EXTREMITY PROC W CC	.9405	3.8	32
224	08	SURG	SHOULDER,ELBOW OR FOREARM PROC,EXC MAJOR JOINT PROC, W/O CC	.6248	2.8	19
225	08	SURG	FOOT PROCEDURES	.7063	3.2	31
226	08	SURG	SOFT TISSUE PROCEDURES WITH CC	1.4308	6.9	35
227	08	SURG	SOFT TISSUE PROCEDURES W/O CC	.6618	3.1	30
228	08	SURG	MAJOR THUMB OR JOINT PROC,OR OTH HAND OR WRIST PROC W CC	.7911	2.8	28
229	08	SURG	HAND OR WRIST PROC, EXCEPT MAJOR JOINT PROC, W/O CC	.5117	1.9	15
230	08	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES OF HIP & FEMUR	.8763	4.3	32
231	08	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES EXCEPT HIP & FEMUR	.9107	3.6	32
232	08	SURG	ARTHROSCOPY	1.1229	3.7	32
233	08	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC WITH CC	1.7280	8.6	37
234	08	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC	.8477	4.6	33
235	08	MED	FRACTURES OF FEMUR	1.1575	8.1	36
236	08	MED	FRACTURES OF HIP & PELVIS	.8565	6.9	35
237	08	MED	SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH	.5662	4.5	33
238	08	MED	OSTEOMYELITIS	1.5778	10.4	38
239	08	MED	PATHOLOGICAL FRACTURES & MUSCULOSKELETAL & CONN TISS MALIGNANCY	.9843	7.6	36
240	08	MED	CONNECTIVE TISSUE DISORDERS WITH CC	1.0769	7.1	35
241	08	MED	CONNECTIVE TISSUE DISORDERS W/O CC	.6218	5.0	33
242	08	MED	SEPTIC ARTHRITIS	1.8229	8.6	37
243	08	MED	MEDICAL BACK PROBLEMS	.6501	5.0	33
244	08	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES WITH CC	.7184	5.4	33
245	08	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES W/O CC	.5108	4.1	32

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
246	08	MED	NON-SPECIFIC ARTHROPATHIES	.5910	4.6	33
247	08	MED	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE	.5285	3.7	32
248	08	MED	TENDONITIS, MYOSITIS & BURSITIS	.6120	4.4	32
249	08	MED	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	.6287	4.1	32
250	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 WITH CC	.6806	4.6	33
251	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 W/O CC	.4230	2.5	24
252	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE 0-17	.3454	1.8	15
253	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE >17 WITH CC	.7983	5.9	34
254	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE >17 W/O CC	.4346	3.7	32
255	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE 0-17	.4582	2.9	31
256	08	MED	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	.6251	3.9	32
257	09	SURG	TOTAL MASTECTOMY FOR MALIGNANCY WITH CC	.9402	5.5	27
258	09	SURG	TOTAL MASTECTOMY FOR MALIGNANCY W/O CC	.7467	4.4	18
259	09	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY WITH CC	.9987	4.8	33
260	09	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY W/O CC	.5654	2.7	18
261	09	SURG	BREAST PROC FOR NON-MALIGNANCY EXCEPT BIOPSY & LOCAL EXCISION	.6285	2.4	16
262	09	SURG	BREAST BIOPSY & LOCAL EXCISION FOR NON-MALIGNANCY	.4464	2.0	13
263	09	SURG	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS WITH CC	2.6691	15.6	44
264	09	SURG	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS W/O CC	1.4197	9.7	38
265	09	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W CC	1.3903	6.6	35
266	09	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W/O CC	.6867	3.2	31
267	09	SURG	PERIANAL & PILONIDAL PROCEDURES	.5738	2.7	31
268	09	SURG	SKIN, SUBCUTANEOUS TISSUE & BREAST PLASTIC PROCEDURES	.6431	2.5	30
269	09		OTHER SKIN, SUBCUT TISS & BREAST PROCEDURE WITH CC	1.7287	8.3	36
270	09		OTHER SKIN, SUBCUT TISS & BREAST PROCEDURE W/O CC	.6744	3.2	31
271	09	MED	SKIN ULCERS	1.1808	8.5	37
272	09	MED	MAJOR SKIN DISORDERS WITH CC	1.0183	7.3	35
273	09	MED	MAJOR SKIN DISORDERS W/O CC	.6811	5.7	34
274	09	MED	MALIGNANT BREAST DISORDERS WITH CC	1.0610	6.4	34
275	09	MED	MALIGNANT BREAST DISORDERS W/O CC	.5793	3.4	31
276	09	MED	NON-MALIGANT BREAST DISORDERS	.5602	3.3	31
277	09	MED	CELLULITIS AGE >17 WITH CC	.9392	7.1	35
278	09	MED	CELLULITIS AGE >17 W/O CC	.6492	5.6	32
279	09	MED	CELLULITIS AGE 0-17	.7278	4.2	24
280	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 WITH CC	.6597	4.7	33

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** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
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NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
281	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 W/O CC	.4233	3.3	31
282	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE 0-17	.3383	2.2	19
283	09	MED	MINOR SKIN DISORDERS WITH CC	.7624	5.5	34
284	09	MED	MINOR SKIN DISORDERS W/O CC	.4659	3.7	32
285	10	SURG	AMPUTAT OF LOWER LIMB FOR ENDOCRINE,NUTRIT,& METABOL DISORDERS	2.8191	16.2	44
286	10	SURG	ADRENAL & PITUITARY PROCEDURES	2.5261	10.9	39
287	10	SURG	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DISORDERS	2.2372	13.7	42
288	10	SURG	O.R. PROCEDURES FOR OBESITY	1.8656	7.4	35
289	10	SURG	PARATHYROID PROCEDURES	1.0587	4.7	33
290	10	SURG	THYROID PROCEDURES	.7805	3.4	21
291	10	SURG	THYROGLOSSAL PROCEDURES	.4589	1.9	10
292	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC WITH CC	2.7779	12.4	40
293	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC	1.1289	6.2	34
294	10	MED	DIABETES AGE >35	.7509	5.9	34
295	10	MED	DIABETES AGE 0-35	.7252	4.4	32
296	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 WITH CC	.9404	6.1	34
297	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 W/O CC	.5480	4.2	32
298	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE 0-17	.6768	3.6	32
299	10	MED	INBORN ERRORS OF METABOLISM	.8628	4.8	33
300	10	MED	ENDOCRINE DISORDERS WITH CC	1.1086	7.1	35
301	10	MED	ENDOCRINE DISORDERS W/O CC	.6250	4.4	32
302	11	SURG	KIDNEY TRANSPLANT	3.7905	15.4	43
303	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROCEDURES FOR NEOPLASM	2.6773	12.3	40
304	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROC FOR NON-NEOPL WITH CC	2.4944	11.0	39
305	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROC FOR NON-NEOPL W/O CC	1.2807	6.0	34
306	11	SURG	PROSTATECTOMY WITH CC	1.4050	7.8	36
307	11	SURG	PROSTATECTOMY W/O CC	.7931	4.6	28
308	11	SURG	MINOR BLADDER PROCEDURES WITH CC	1.5067	6.9	35
309	11	SURG	MINOR BLADDER PROCEDURES W/O CC	.7882	3.6	32
310	11	SURG	TRANSURETHRAL PROCEDURES WITH CC	.9014	4.4	32
311	11	SURG	TRANSURETHRAL PROCEDURES W/O CC	.5211	2.5	18
312	11	SURG	URETHRAL PROCEDURES, AGE >17 WITH CC	.8071	4.1	32
313	11	SURG	URETHRAL PROCEDURES, AGE >17 W/O CC	.4757	2.4	21
314	11	SURG	URETHRAL PROCEDURES, AGE 0-17	.4271	2.3	26
315	11	SURG	OTHER KIDNEY & URINARY TRACT O.R. PROCEDURES	2.3366	9.2	36

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
316	11	MED	RENAL FAILURE	1.2688	6.4	34
317	11	MED	ADMIT FOR RENAL DIALYSIS	.3814	2.3	22
318	11	MED	KIDNEY & URINARY TRACT NEOPLASMS WITH CC	1.0637	6.1	34
319	11	MED	KIDNEY & URINARY TRACT NEOPLASMS W/O CC	.5453	2.8	31
320	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 WITH CC	1.0261	6.9	35
321	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 W/O CC	.6830	5.2	31
322	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE 0-17	.7006	4.6	33
323	11	MED	URINARY STONES WITH CC, &/OR ESW LITHOTRIPSY	.7726	3.0	31
324	11	MED	URINARY STONES W/O CC	.3954	2.2	16
325	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 WITH CC	.6673	4.5	32
326	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 W/O CC	.4276	3.0	25
327	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE 0-17	.5444	3.1	31
328	11	MED	URETHRAL STRICTURE AGE >17 WITH CC	.6445	3.9	32
329	11	MED	URETHRAL STRICTURE AGE >17 W/O CC	.4020	2.3	19
330	11	MED	URETHRAL STRICTURE AGE 0-17	.2754	1.6	9
331	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 WITH CC	.9501	5.3	33
332	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 W/O CC	.5557	3.3	31
333	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE 0-17	.8884	4.9	33
334	12	SURG	MAJOR MALE PELVIC PROCEDURES W CC	1.8224	10.3	38
335	12	SURG	MAJOR MALE PELVIC PROCEDURES W/O CC	1.3462	8.4	24
336	12	SURG	TRANSURETHRAL PROSTATECTOMY WITH CC	.9827	5.8	30
337	12	SURG	TRANSURETHRAL PROSTATECTOMY W/O CC	.6603	4.2	15
338	12	SURG	TESTES PROCEDURES, FOR MALIGNANCY	.7604	3.1	31
339	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE >17	.5847	2.5	30
340	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE 0-17	.4283	2.4	13
341	12	SURG	PENIS PROCEDURES	.9851	3.8	29
342	12	SURG	CIRCUMCISION AGE >17	.4806	2.1	23
343	12	SURG	CIRCUMCISION AGE 0-17	.3742	1.7	6
344	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	1.0569	5.3	33
345	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIGNANCY	.7877	4.1	32
346	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, WITH CC	.9214	5.5	34
347	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, W/O CC	.4564	2.5	29
348	12	MED	BENIGN PROSTATIC HYPERTROPHY WITH CC	.6635	3.8	32
349	12	MED	BENIGN PROSTATIC HYPERTROPHY W/O CC	.3828	2.1	19
350	12	MED	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	.6716	4.9	29

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
351	12	MED	STERILIZATION, MALE	.3293	1.3	5
352	12	MED	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	.5500	3.1	31
353	13	SURG	PELVIC EVISCERATION, RADICAL HYSTERECTOMY & RADICAL VULVECTOMY	2.0645	11.4	39
354	13	SURG	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG WITH CC	1.4248	8.2	35
355	13	SURG	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC	.8943	5.7	15
356	13	SURG	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	.7291	4.8	19
357	13	SURG	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIG	2.1705	10.8	39
358	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY WITH CC	1.2032	7.1	29
359	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC	.8132	5.4	14
360	13	SURG	VAGINA, CERVIX & VULVA PROCEDURES	.7760	3.8	32
361	13	SURG	LAPAROSCOPY & INCISIONAL TUBAL INTERRUPTION	.6859	2.7	31
362	13	SURG	ENDOSCOPIC TUBAL INTERRUPTION	.3490	1.5	6
363	13	SURG	D&C, CONIZATION & RADIO-IMPLANT, FOR MALIGNANCY	.6987	3.6	32
364	13	SURG	D&C, CONIZATION EXCEPT FOR MALIGNANCY	.4669	2.3	21
365	13	SURG	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.8928	8.8	37
366	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM WITH CC	1.1726	6.6	35
367	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC	.4896	2.9	31
368	13	MED	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	.8927	5.9	34
369	13	MED	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	.5109	3.1	31
370	14	SURG	CESAREAN SECTION W CC	.9848	6.2	34
371	14	SURG	CESAREAN SECTION W/O CC	.6544	4.5	13
372	14	MED	VAGINAL DELIVERY W COMPLICATING DIAGNOSES	.4540	3.1	20
373	14	MED	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	.2987	2.2	8
374	14	SURG	VAGINAL DELIVERY W STERILIZATION &/OR D&C	.4981	2.7	8
375	14	SURG	VAGINAL DELIVERY W O.R. PROC EXCEPT STERIL &/OR D&C	.6735	4.4	29
376	14	MED	POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE	.3502	2.8	25
377	14	SURG	POSTPARTUM & POST ABORTION DIAGNOSES W O.R. PROCEDURE	1.5119	3.6	32
378	14	MED	ECTOPIC PREGNANCY	.7232	4.2	15
379	14	MED	THREATENED ABORTION	.2493	2.0	14
380	14	MED	ABORTION W/O D&C	.2644	1.8	14
381	14	SURG	ABORTION W D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	.3769	1.7	13
382	14	MED	FALSE LABOR	.1186	1.2	4
383	14	MED	OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS	.3759	3.4	31
384	14	MED	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	.3279	2.2	29
385	15		NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.2084	1.8	30

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
386	15		EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	3.6039	17.9	46
387	15		PREMATURITY W MAJOR PROBLEMS	1.8046	13.3	41
388	15		PREMATURITY W/O MAJOR PROBLEMS	1.1431	8.6	37
389	15		FULL TERM NEONATE W MAJOR PROBLEMS	2.4098	7.3	35
390	15		NEONATE W OTHER SIGNIFICANT PROBLEMS	.8111	3.8	32
391	15		NORMAL NEWBORN	.2191	3.1	11
392	16	SURG	SPLENECTOMY AGE >17	3.5891	12.4	40
393	16	SURG	SPLENECTOMY AGE 0-17	1.5022	9.1	37
394	16	SURG	OTHER O.R. PROCEDURES OF THE BLOOD AND BLOOD FORMING ORGANS	1.5355	5.7	34
395	16	MED	RED BLOOD CELL DISORDERS AGE >17	.7466	4.6	33
396	16	MED	RED BLOOD CELL DISORDERS AGE 0-17	.3575	1.8	15
397	16	MED	COAGULATION DISORDERS	1.0955	5.5	34
398	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS WITH CC	1.2279	6.7	35
399	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC	.6906	4.1	32
400	17	SURG	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE	2.6981	10.5	38
401	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W CC	2.2572	10.4	38
402	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W/O CC	.8945	4.1	32
403	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W CC	1.6044	8.3	36
404	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC	.7753	4.6	33
405	17		ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE 0-17	1.0281	4.9	33
406	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R.PROC W CC	2.7445	11.9	40
407	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R.PROC W/O CC	1.3042	6.4	34
408	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R.PROC	.9592	4.1	32
409	17	MED	RADIOTHERAPY	1.0357	6.9	35
410	17	MED	CHEMOTHERAPY	.4890	2.6	20
411	17	MED	HISTORY OF MALIGNANCY W/O ENDOSCOPY	.4543	2.7	27
412	17	MED	HISTORY OF MALIGNANCY W ENDOSCOPY	.4046	2.1	20
413	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG WITH CC	1.2853	7.3	35
414	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC	.7557	4.7	33
415	18	SURG	O.R. PROCEDURE FOR INFECTIOUS & PARASITIC DISEASES	3.6424	15.1	43
416	18	MED	SEPTECEMIA AGE >17	1.5346	7.4	35
417	18	MED	SEPTECEMIA AGE 0-17	.8929	5.3	33
418	18	MED	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS	.9641	6.6	35
419	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 WITH CC	.9552	5.9	34
420	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 W/O CC	.6805	4.7	33

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
421	18	MED	VIRAL ILLNESS AGE >17	.6337	4.3	31
422	18	MED	VIRAL ILLNESS & FEVER OF UNKNOWN ORIGIN AGE 0-17	.5874	4.0	27
423	18	MED	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES	1.5845	8.0	36
424	19	SURG	O.R. PROCEDURE W PRINCIPAL DIAGNOSES OF MENTAL ILLNESS	2.3418	13.7	42
425	19	MED	ACUTE ADJUST REACT & DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	.6470	4.5	32
426	19	MED	DEPRESSIVE NEUROSES	.6255	5.6	34
427	19	MED	NEUROSES EXCEPT DEPRESSIVE	.6133	5.4	33
428	19	MED	DISORDERS OF PERSONALITY & IMPULSE CONTROL	.7325	6.3	34
429	19	MED	ORGANIC DISTURBANCES & MENTAL RETARDATION	.9016	7.5	35
430	19	MED	PSYCHOSES	.8957	8.8	37
431	19	MED	CHILDHOOD MENTAL DISORDERS	.6347	5.9	34
432	19	MED	OTHER MENTAL DISORDER DIAGNOSES	.7329	4.5	32
433	20		ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA	.3974	3.2	31
434	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT WITH CC	.7886	5.7	34
435	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT W/O CC	.5510	4.9	33
436	20		ALC/DRUG DEPENDENCE W REHABILITATION THERAPY	.9873	12.0	40
437	20		ALC/DRUG DEPENDENCE, COMBINED REHAB & DETOX THERAPY	1.2005	13.8	42
438	20		NO LONGER VALID	.0000	.0	0
439	21	SURG	SKIN GRAFTS FOR INJURIES	1.6731	6.7	35
440	21	SURG	WOUND DEBRIDEMENTS FOR INJURIES	2.4992	10.7	39
441	21	SURG	HAND PROCEDURES FOR INJURIES	.7381	2.5	31
442	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES WITH CC	1.8642	5.6	34
443	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES W/O CC	1.1906	4.2	32
444	21	MED	MULTIPLE TRAUMA AGE >17 WITH CC	.7694	5.3	33
445	21	MED	MULTIPLE TRAUMA AGE >17 W/O CC	.4950	3.7	32
446	21	MED	MULTIPLE TRAUMA AGE 0-17	.4738	2.4	22
447	21	MED	ALLERGIC REACTIONS AGE >17	.4702	2.6	24
448	21	MED	ALLERGIC REACTIONS AGE 0-17	.3428	2.9	17
449	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 WITH CC	.7983	4.4	32
450	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 W/O CC	.4648	2.7	28
451	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE 0-17	.3947	2.6	16
452	21	MED	COMPLICATIONS OF TREATMENT WITH CC	.8932	4.6	33
453	21	MED	COMPLICATIONS OF TREATMENT W/O CC	.4725	3.1	31
454	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG WITH CC	.9104	4.6	33
455	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG W/O CC	.4226	2.7	27

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
456	22		BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	3.1114	5.6	34
457	22	MED	EXTENSIVE BURNS W/O O.R. PROCEDURE	1.8725	2.7	31
458	22	SURG	NON-EXTENSIVE BURNS W SKIN GRAFT	3.8130	16.4	44
459	22	SURG	NON-EXTENSIVE BURNS W WOUND DEBRIDEMENT OR OTHER O.R. PROC	1.9164	10.0	38
460	22	MED	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.0165	6.3	34
461	23	SURG	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES	.7762	2.5	31
462	23	MED	REHABILITATION	1.9047	14.4	42
463	23	MED	SIGNS & SYMPTOMS W CC	.7540	5.1	33
464	23	MED	SIGNS & SYMPTOMS W/O CC	.4719	3.3	31
465	23	MED	AFTERCARE W HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	.9282	1.8	12
466	23	MED	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	.5463	2.6	31
467	23	MED	OTHER FACTORS INFLUENCING HEALTH STATUS	.4339	2.4	30
468			EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	3.3150	12.7	41
469		**	PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS	.0000	.0	0
470		**	UNGROUPABLE	.0000	.0	0
471	08	SURG	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY	3.9672	15.4	43
472	22	SURG	EXTENSIVE BURNS W O.R. PROCEDURE	12.7129	19.1	47
473	17		ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE >17	3.0963	9.4	37
474	04		RESPIRATORY SYSTEM DIAGNOSIS WITH TRACHEOSTOMY	18.4688	37.6	66
475	04	MED	RESPIRATORY SYSTEM DIAGNOSIS WITH VENTILATOR SUPPORT	3.6290	9.9	38
476			PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	2.2425	15.0	43
477			NON-EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	1.4318	6.6	35

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

BILLING CODE 4120-03-C

TABLE 6A—NEW DIAGNOSIS CODES

Diagnosis Code	Description	DRG	CC
088.81	Lyme disease	423	No.
088.89	Other specified arthropod-borne diseases	423	No.
345.00	Generalized nonconvulsive epilepsy, without mention of intractable epilepsy	24, 25, 26	No.
345.01	Generalized nonconvulsive epilepsy, with intractable epilepsy	24, 25, 26	Yes.
345.10	Generalized convulsive epilepsy, without mention of intractable epilepsy	24, 25, 26	Yes.
345.11	Generalized convulsive epilepsy, with intractable epilepsy	24, 25, 26	Yes.
345.40	Partial epilepsy, with impairment of consciousness, without mention of intractable epilepsy	24, 25, 26	No.
345.41	Partial epilepsy, with impairment of consciousness, with intractable epilepsy	24, 25, 26	Yes.
345.50	Partial epilepsy, without mention of impairment of consciousness, without mention of intractable epilepsy	24, 25, 26	No.
345.51	Partial epilepsy, without mention of impairment of consciousness, with intractable epilepsy	24, 25, 26	Yes.
345.60	Infantile spasms, without mention of intractable epilepsy	24, 25, 26	No.
345.61	Infantile spasms, with intractable epilepsy	24, 25, 26	Yes.
345.70	Epilepsia partialis continua, without mention of intractable epilepsy	24, 25, 26	No.
345.71	Epilepsia partialis continua, with intractable epilepsy	24, 25, 26	Yes.
345.80	Other forms of epilepsy, without mention of intractable epilepsy	24, 25, 26	No.
345.81	Other forms of epilepsy, with intractable epilepsy	24, 25, 26	Yes.
345.90	Epilepsy, unspecified, without mention of intractable epilepsy	24, 25, 26	No.
345.91	Epilepsy, unspecified with intractable epilepsy	24, 25, 26	Yes.
403.00	Hypertensive renal disease, malignant, without mention of renal failure	331, 332, 333	Yes.
403.01	Hypertensive renal disease, malignant, with renal failure	316	Yes.
403.10	Hypertensive renal disease, benign, without mention of renal failure	331, 332, 333	No.
403.11	Hypertensive renal disease, benign, with renal failure	316	Yes.
403.90	Hypertensive renal disease, unspecified, without mention of renal failure	331, 332, 333	No.
403.91	Hypertensive renal disease, unspecified, with renal failure	316	Yes.
404.00	Hypertensive heart and renal disease, malignant, without mention of congestive heart failure or renal failure	134	Yes.
404.01	Hypertensive heart and renal disease, malignant, with congestive heart failure	124, 127	Yes.
404.02	Hypertensive heart and renal disease, malignant, with renal failure	316	Yes.
404.03	Hypertensive heart and renal disease, malignant, with congestive heart failure and renal failure	124, 127	Yes.
404.10	Hypertensive heart and renal disease, benign, without mention of congestive heart failure or renal failure	134	No.
404.11	Hypertensive heart and renal disease, benign, with congestive heart failure	124, 127	Yes.
404.12	Hypertensive heart and renal disease, benign, with renal failure	316	Yes.
404.13	Hypertensive heart and renal disease, benign, with congestive heart failure and renal failure	124, 127	Yes.
404.90	Hypertensive heart and renal disease, unspecified, without mention of congestive heart failure or renal failure	134	No.
404.91	Hypertensive heart and renal disease, unspecified, with congestive heart failure	124, 127	Yes.
404.92	Hypertensive heart and renal disease, unspecified, with renal failure	316	Yes.
404.93	Hypertensive heart and renal disease, unspecified, with congestive heart failure and renal failure	124, 127	Yes.
410.00	Acute myocardial infarction, of anterolateral wall, episode of care, unspecified	132, 133	No.
410.01	Acute myocardial infarction, of anterolateral wall, initial episode of care	115, 121, 122, 123	Yes.
410.02	Acute myocardial infarction, of anterolateral wall, subsequent episode of care	132, 133	No.
410.10	Acute myocardial infarction, of other anterior wall, subsequent episode of care unspecified	132, 133	No.
410.11	Acute myocardial infarction, of other anterior wall, initial episode of care	115, 121, 122, 123	Yes.
410.12	Acute myocardial infarction, of other anterior wall, subsequent episode of care	132, 133	No.
410.20	Acute myocardial infarction, of inferolateral wall, episode of care unspecified	132, 133	No.
410.21	Acute myocardial infarction, of inferolateral wall, initial episode of care	115, 121, 122, 123	Yes.
410.22	Acute myocardial infarction, of inferolateral wall, subsequent episode of care	132, 133	No.
410.30	Acute myocardial infarction, of inferoposterior wall, episode of care unspecified	132, 133	No.
410.31	Acute myocardial infarction, of inferoposterior wall, initial episode of care	115, 121, 122, 123	Yes.
410.32	Acute myocardial infarction, of inferoposterior wall, subsequent episode of care	132, 133	No.
410.40	Acute myocardial infarction, of other inferior wall, episode of care unspecified	132, 133	No.
410.41	Acute myocardial infarction, of other inferior wall, initial episode of care	115, 121, 122, 123	Yes.
410.42	Acute myocardial infarction, of other inferior wall, subsequent episode of care	132, 133	No.
410.50	Acute myocardial infarction, of other lateral wall, episode of care unspecified	132, 133	No.
410.51	Acute myocardial infarction, of other lateral wall, initial episode of care	115, 121, 122, 123	Yes.
410.52	Acute myocardial infarction, of other lateral wall, subsequent episode of care	132, 133	No.
410.60	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified	132, 133	No.
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	115, 121, 122, 123	Yes.
410.62	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care	132, 133	No.
410.70	Acute myocardial infarction, subendocardial infarction, episode of care unspecified	132, 133	No.
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	115, 121, 122, 123	Yes.
410.72	Acute myocardial infarction, subendocardial infarction, subsequent episode of care	132, 133	No.
410.80	Acute myocardial infarction, of other specified sites, episode of care unspecified	132, 133	No.
410.81	Acute myocardial infarction, of other specified sites, initial episode of care	115, 121, 122, 123	Yes.
410.82	Acute myocardial infarction, of other specified sites, subsequent episode of care	132, 133	No.
410.90	Acute myocardial infarction, unspecified site, episode of care unspecified	132, 133	No.
410.91	Acute myocardial infarction, unspecified site, initial episode of care	115, 121, 122, 123	Yes.
410.92	Acute myocardial infarction, unspecified site, subsequent episode of care	132, 133	No.
411.81	Acute ischemic heart disease without myocardial infarction	124, 140	Yes.
411.89	Other acute and subacute forms of ischemic heart disease	124, 140	Yes.
429.71	Acquired cardiac septal defect	124, 144, 145	Yes.
429.79	Other certain sequelae of myocardial infarction, not elsewhere classified	124, 144, 145	Yes.
493.20	Chronic obstructive asthma (with obstructive pulmonary disease), without mention of status asthmaticus	88	Yes.
493.21	Chronic obstructive asthma (with obstructive pulmonary disease), with status asthmaticus	88	Yes.
651.30	Twin pregnancy with fetal loss and retention of one fetus, unspecified as to episode of care or not applicable	469	No.
651.31	Twin pregnancy with fetal loss and retention of one fetus, delivered, with or without mention of antepartum condition	370, 371, 372, 373, 374, 375.	No.
651.33	Twin pregnancy with fetal loss and retention of one fetus, antepartum condition or complication	383, 384	No.
651.40	Triplet pregnancy with fetal loss and retention of one or more fetus(es), unspecified as to episode of care or not applicable.	469	No.

TABLE 6A—NEW DIAGNOSIS CODES—Continued

Diagnosis Code	Description	DRG	CC
651.41	Triplet pregnancy with fetal loss and retention of one or more fetus(es), delivered, with or without mention of antepartum condition.	370, 371, 372, 373, 374, 375.	No.
651.43	Triplet pregnancy with fetal loss and retention of one or more fetus(es), antepartum condition or complication	383, 384	No.
651.50	Quadruplet pregnancy with fetal loss and retention of one or more fetus(es), unspecified as to episode of care or not applicable.	469	No.
651.51	Quadruplet pregnancy with fetal loss and retention of one or more fetus(es), delivered, with or without mention of antepartum condition.	370, 371, 372, 373, 374, 375.	No.
651.53	Quadruplet pregnancy with fetal loss and retention of one or more fetus(es), antepartum condition or complication	383, 384	No.
651.60	Other multiple pregnancy with fetal loss and retention of one or more fetus(es), unspecified as to episode of care or not applicable.	469	No.
651.61	Other multiple pregnancy with fetal loss and retention of one or more fetus(es), delivered, with or without mention of antepartum condition.	370, 371, 372, 373, 374, 375.	No.
651.63	Other multiple pregnancy with fetal loss and retention of one or more fetus(es), antepartum condition or complication	383, 384	No.
759.81	Prader-Willi syndrome	390	No.
759.82	Marfan syndrome	390	No.
759.89	Other specified anomalies	390	No.
996.60	Infection and inflammatory reaction due to unspecified device, implant, and graft	452, 453	Yes.
996.61	Infection and inflammatory reaction due to cardiac device, implant, and graft	144, 145	Yes.
996.62	Infection and inflammatory reaction due to other vascular device, implant, and graft	144, 145	Yes.
996.63	Infection and inflammatory reaction due to nervous system device, implant, and graft	34, 35	Yes.
996.64	Infection and inflammatory reaction due to indwelling urinary catheter	331, 332, 333	Yes.
996.65	Infection and inflammatory reaction due to other genitourinary device, implant, and graft	331, 332, 333	Yes.
996.66	Infection and inflammatory reaction due to internal joint prosthesis	249	Yes.
996.67	Infection and inflammatory reaction due to other internal orthopedic device, implant, and graft	249	Yes.
996.69	Infection and inflammatory reaction due to other internal prosthetic device, implant, and graft	452, 453	Yes.
996.70	Other complications due to unspecified device, implant, and graft	452, 453	Yes.
996.71	Other complications due to heart valve prosthesis	144, 145	Yes.
996.72	Other complications due to other cardiac device, implant, and graft	144, 145	Yes.
996.73	Other complications due to renal dialysis device, implant, and graft	144, 145	Yes.
996.74	Other complications due to other vascular device, implant, and graft	144, 145	Yes.
996.75	Other complications due to nervous system device, implant, and graft	34, 35	Yes.
996.76	Other complications due to genitourinary device, implant, and graft	331, 332, 333	Yes.
996.77	Other complications due to internal joint prosthesis	249	Yes.
996.78	Other complications due to other internal orthopedic device, implant, and graft	249	Yes.
996.79	Other complications due to other internal prosthetic device, implant, and graft	452, 453	Yes.
V23.7	Insufficient prenatal care	469	Yes.
V30.00	Single liveborn, born in hospital, delivered without mention of cesarean section	391	No.
V30.01	Single liveborn, born in hospital, delivered by cesarean section	391	No.
V31.00	Twin, mate liveborn, born in hospital, delivered without mention of cesarean section	391	No.
V31.01	Twin, mate liveborn, born in hospital, delivered by cesarean section	391	No.
V32.00	Twin, mate stillborn, born in hospital, delivered without mention of cesarean section	391	No.
V32.01	Twin, mate stillborn, born in hospital, delivered by cesarean section	391	No.
V33.00	Twin, unspecified, born in hospital, delivered without mention of cesarean section	391	No.
V33.01	Twin, unspecified, born in hospital, delivered by cesarean section	391	No.
V34.00	Other multiple, mates all liveborn, born in hospital, delivered without mention of cesarean section	391	No.
V34.01	Other multiple, mates all liveborn, born in hospital, delivered by cesarean section	391	No.
V35.00	Other multiple, mates all stillborn, born in hospital, delivered without mention of cesarean section	391	No.
V35.01	Other multiple, mates all stillborn, born in hospital, delivered by cesarean section	391	No.
V36.00	Other multiple, mates live- and stillborn, born in hospital, delivered without mention of cesarean section	391	No.
V36.01	Other multiple, mates live- and stillborn, born in hospital, delivered by cesarean section	391	No.
V37.00	Other multiple, unspecified, born in hospital, delivered without mention of cesarean section	391	No.
V37.01	Other multiple, unspecified, born in hospital, delivered by cesarean section	391	No.
V39.00	Unspecified, born in hospital, delivered without mention of cesarean section	391	No.
V39.01	Unspecified, born in hospital, delivered by cesarean section	391	No.

TABLE 6B—NEW PROCEDURE CODES

Procedure Code	Description	DRG
11.75	Radial Keratotomy [1]	42; 442, 443
11.76	Epikeratophakia [1]	40, 41; 442, 443
31.95	Tracheoesophageal fistulization	Non-OR
32.01	Endoscopic excision or destruction of lesion or tissue of bronchus	Non-OR, 412
32.09	Other local excision or destruction of lesion or tissue of bronchus	75
32.28	Endoscopic excision or destruction of lesion or tissue of lung	Non-OR, 412
38.95	Venous catheterization for renal dialysis	Non-OR
42.33	Endoscopic excision or destruction of lesion or tissue of esophagus	Non-OR, 412
43.11	Percutaneous [endoscopic] gastrostomy [PEG]	Non-OR
43.19	Other gastrostomy	Non-OR
44.43	Endoscopic control of gastric or duodenal bleeding	Non-OR
44.44	Transcatheter embolization for gastric or duodenal bleeding	Non-OR
44.49	Other control of hemorrhage of stomach or duodenum	Non-OR
45.30	Endoscopic excision or destruction of lesion of duodenum	Non-OR, 412
45.43	Endoscopic destruction of other lesion or tissue of large intestine	Non-OR, 412
46.32	Percutaneous [endoscopic] jejunostomy [PEJ]	Non-OR
46.85	Dilation of colon	Non-OR
49.31	Endoscopic excision or destruction of lesion or tissue of anus	Non-OR, 412

TABLE 6B—NEW PROCEDURE CODES—Continued

Procedure Code	Description	DRG
49.39	Other local excision or destruction of lesion or tissue of anus	157, 158; 267
51.10	Endoscopic retrograde cholangiopancreatography [ERCP]	Non-OR, 412
51.14	Other closed [endoscopic] biopsy of biliary duct or sphincter of Oddi	Non-OR, 412
51.15	Pressure measurement of sphincter of Oddi	Non-OR
51.64	Endoscopic excision or destruction of lesion of biliary ducts or sphincter of Oddi	Non-OR, 412
51.84	Endoscopic dilation of ampulla and biliary duct	Non-OR, 412
51.85	Endoscopic sphincterotomy and papillotomy	Non-OR, 412
51.86	Endoscopic insertion of nasobiliary drainage tube	Non-OR, 412
51.87	Endoscopic insertion of stent (tube) into bile duct	Non-OR, 412
51.88	Endoscopic removal of stone(s) from biliary tract	Non-OR
52.13	Endoscopic retrograde pancreatography [ERP]	Non-OR, 412
52.14	Closed [endoscopic] biopsy of pancreatic duct	Non-OR, 412
52.21	Endoscopic excision or destruction of lesion or tissue of pancreatic duct	Non-OR, 412
52.22	Other excision or destruction of lesion or tissue of pancreas or pancreatic duct	191, 192; 292, 293
52.97	Endoscopic insertion of nasopancreatic drainage tube	Non-OR, 412
52.98	Endoscopic dilation of pancreatic duct	Non-OR, 412
57.17	Percutaneous cystostomy	Non-OR
57.18	Other suprapubic cystostomy	308, 309; 344, 345; 360; 400; 406, 407; 442, 443
77.56	Repair of hammer toe	225
77.57	Repair of claw toe	225
77.58	Other excision, fusion, and repair of toes	225; 442, 443
81.40	Repair of hip, not elsewhere classified	210, 211, 212; 442, 443
81.52	Partial hip replacement	209; 292, 293; 442, 443; 471
81.53	Revision of hip replacement	209; 292, 293; 442, 443; 471
81.54	Total knee replacement	209; 442, 443; 471
81.55	Revision of knee replacement	209; 442, 443; 471
81.56	Total ankle replacement	209; 442, 443; 471
81.57	Replacement of joint of foot and toe	225; 442, 443
81.72	Arthroplasty of metacarpophalangeal and interphalangeal joint without implant	7, 8; 228; 441
81.73	Total wrist replacement	209; 442, 443
81.74	Arthroplasty of carpocarpal or carpometacarpal joint with implant	7, 8; 228; 441
81.75	Arthroplasty of carpocarpal or carpometacarpal joint without implant	7, 8; 228; 441
81.80	Total shoulder replacement	209; 442, 443
88.97	Magnetic resonance imaging of other and unspecified sites	Non-OR
88.98	Bone mineral density studies [1]	Non-OR
89.10	Intracarotid amobarbital test	Non-OR
89.19	Video and radio-telemetered electroencephalographic monitoring	Non-OR
94.61	Alcohol rehabilitation	436
94.62	Alcohol detoxification	Non-OR
94.63	Alcohol rehabilitation and detoxification	437
94.64	Drug rehabilitation	436
94.65	Drug detoxification	Non-OR
94.66	Drug rehabilitation and detoxification	437
94.67	Combined alcohol and drug rehabilitation	436
94.68	Combined alcohol and drug detoxification	Non-OR
94.69	Combined alcohol and drug rehabilitation and detoxification	437
97.05	Replacement of stent (tube) in biliary or pancreatic duct	Non-OR
98.51	Extracorporeal shockwave lithotripsy [ESWL] of the kidney, ureter and/or bladder	Non-OR, 323
98.52	Extracorporeal shockwave lithotripsy [ESWL] of the gallbladder and /or bile duct [1]	Non-OR
98.59	Extracorporeal shockwave lithotripsy of other sites [1]	Non-OR

[1] These procedures are not covered under Medicare. See Medicare Coverage Issues Manual 35-54; 35-81 and 50-44. Procedures potentially classified under code 98.59 will be evaluated for Medicare Coverage as they are developed.

TABLE 6C—REVISED PROCEDURE CODE TITLES AND INCLUSION TERMS THAT AFFECT DRG ASSIGNMENT

Procedure Code	Description	DRG
38.93	Venous catheterization, not elsewhere classified	No change
43.41	Endoscopic excision or destruction of lesion or tissue of stomach	Non-OR; 412
45.31	Other local excision of lesion of duodenum	No change
45.41	Excision of lesion or tissue of larger intestine	No change
45.42	Endoscopic polypectomy of large intestine	Non-OR; 412
51.11	Endoscopic retrograde cholangiography [ERC]	Non-OR; 412
51.12	Percutaneous biopsy of gall-bladder or bile ducts	Non-OR
51.82	Pancreatic sphincterotomy	154, 155, 156; 191, 192; 442, 443
52.92	Cannulation of pancreatic duct	No change
52.93	Endoscopic insertion of stent (tube) into pancreatic duct [1]	Non-OR; 412
52.94	Endoscopic removal of stone(s) from pancreatic duct [1]	Non-OR
52.99	Other operation on pancreas, not elsewhere classified [1]	170, 171; 191, 192; 442, 443
57.19	Other cystostomy	308, 309; 442, 443
57.21	Vesicostomy	308, 309; 344, 345; 360; 400; 406, 407; 442, 443
57.22	Revision or closure of vesicostomy	308, 309; 344, 345; 365; 400; 406, 407; 442, 443
77.54	Excision or correction of bunionette	No change
81.02	Other cervical fusion, anterior technique	4; 214, 215; 442, 443

TABLE 6C—REVISED PROCEDURE CODE TITLES AND INCLUSION TERMS THAT AFFECT DRG ASSIGNMENT—Continued

Procedure Code	Description	DRG
81.03	Other cervical fusion, posterior technique	4; 214, 215; 442, 443
81.04	Dorsal and dorsolumbar fusion, anterior technique	4; 214, 215; 442, 443
81.05	Dorsal and dorsolumbar fusion, posterior technique	4; 214, 215; 442, 443
81.06	Lumbar and lumbosacral fusion, anterior technique	4; 214, 215; 442, 443
81.07	Lumbar and lumbosacral fusion, lateral transverse process technique	4; 214, 215; 442, 443
81.08	Lumbar and lumbosacral fusion, posterior technique	4; 214, 215; 442, 443
81.09	Refusion of spine, any level or technique	4; 214, 215; 442, 443
81.51	Total hip replacement	209; 442, 443; 471
81.59	Revision of joint replacement, not elsewhere classified	233, 234; 442, 443
81.71	Arthroplasty of metacarpophalangeal and interphalangeal joint with implant	7, 8; 228; 441
81.79	Other repair of hand, fingers, and wrist	7, 8; 228; 441
81.81	Partial shoulder replacement	209; 442, 443
81.84	Total elbow replacement	209; 442, 443
89.68	Monitoring of cardiac output by other technique	Non-OR

[1] The notes for code 52.99 were revised to include the open procedures formerly included in codes 52.93 and 52.94, thus adding 52.99 to DRGs 170 and 171.

TABLE 6D—EXPANDED DIAGNOSIS CODES THAT ARE NO LONGER ACCEPTED IN GROUPER [1]

Diagnosis Code	Description	DRG
088.8	Other specified arthropod-borne diseases	423
345.0	Generalized nonconvulsive epilepsy	24, 25, 26
345.1	Generalized convulsive epilepsy	24, 25, 26
345.4	Partial epilepsy, with impairment or consciousness	24, 25, 26
345.5	Partial epilepsy, without mention of impairment of consciousness	24, 25, 26
345.6	Infantile spasms	24, 25, 26
345.7	Epilepsia partialis continua	24, 25, 26
345.8	Other forms of epilepsy	24, 25, 26
345.9	Epilepsy, unspecified	24, 25, 26
403.0	Hypertensive renal disease, malignant	331, 332, 333
403.1	Hypertensive renal disease, benign	331, 332, 333
403.9	Hypertensive renal disease, unspecified	331, 332, 333
404.0	Hypertensive heart and renal disease, malignant	134
404.1	Hypertensive heart and renal disease, benign	134
404.9	Hypertensive heart and renal disease, unspecified	134
410.0	Acute myocardial infarction, of anterolateral wall	115, 121, 122, 123
410.1	Acute myocardial infarction, of other anterior wall	115, 121, 122, 123
410.2	Acute myocardial infarction, of inferolateral wall	115, 121, 122, 123
410.3	Acute myocardial infarction, of inferoposterior wall	115, 121, 122, 123
410.4	Acute myocardial infarction, of other inferior wall	115, 121, 122, 123
410.5	Acute myocardial infarction, of other lateral wall	115, 121, 122, 123
410.6	True posterior wall infarction	115, 121, 122, 123
410.7	Acute myocardial infarction, subendocardial infarction	115, 121, 122, 123
410.8	Acute myocardial infarction of other specified sites	115, 121, 122, 123
410.9	Acute myocardial infarction, unspecified site	115, 121, 122, 123
411.8	Other acute and subacute forms of ischemic heart disease, unspecified	124, 140
759.8	Other specified congenital anomalies	390
996.6	Infection and inflamatory reaction due to internal prosthetic device, implant, and graft	452, 453
996.7	Other complications of internal prosthetic device, implant, and graft	452, 453
V30.0	Single liveborn, born in hospital	391
V31.0	Twin, mate liveborn, born in hospital	391
V32.0	Twin, mate stillborn, born in hospital	391
V33.0	Twin, unspecified, born in hospital	391
V34.0	Other multiple, mates all liveborn, born in hospital	391
V35.0	Other multiple, mates all stillborn, born in hospital	391
V36.0	Other multiple, mates live- and stillborn, born in hospital	391
V37.0	Other multiple unspecified, born in hospital	391
V39.0	Liveborn unspecified, born in hospital	391

[1] See Table 6a for New Diagnosis Codes (5 digits).

TABLE 6E—DELETED PROCEDURE CODES

Procedure Code	Description	DRG
32.0	Local excision or destruction of lesion or tissue of bronchus	75
43.1	Temporary gastrostomy	Non-OR
43.2	Permanent gastrostomy	Non-OR
49.3	Local excision or destruction of other lesion or tissue of anus	157, 158; 267
51.97	Therapeutic endoscopic procedures on biliary tract, oral route	Non-OR
52.2	Local excision or destruction of pancreatic lesion	191, 192; 292, 293
52.91	Endoscopic retrograde cannulation of pancreatic duct [ERCP]	Non-OR
59.96	Extracorporeal shockwave lithotripsy [ESWL]	Non-OR
81.18	Other fusion of toe	225; 442, 443
81.31	Arthroplasty of foot and toe with synthetic prosthesis	7, 8; 225; 442, 443
81.39	Other arthroplasty of foot and toe	7, 8; 225; 442, 443

TABLE 6E—DELETED PROCEDURE CODES—Continued

Procedure Code	Description	DRG
81.41	Total knee replacement	209; 442, 443; 471
81.48	Total ankle replacement	209; 442, 443; 471
81.61	Replacement of head of femur with use of methyl methacrylate	209; 292, 293; 442, 443; 471
81.62	Other replacement of head of femur	209; 292, 293; 442, 443; 471
81.63	Replacement of acetabulum with use of methyl methacrylate	209; 442, 443; 471
81.64	Other replacement of acetabulum	209; 442, 443; 471
81.69	Other repair of hip	210, 211, 212; 442, 443
81.86	Arthroplasty of carpals with synthetic prosthesis	7, 8; 228; 441
81.87	Other repair of wrist	7, 8; 228; 441
88.99	Magnetic resonance imaging of other and unspecified sites	Non-OR

BILLING CODE 4120-03-M

Table 6f --Additions to the CC Exclusions List

CCs that are added to the list are in Table 6f--Additions to the CC Exclusions List. Each of the principal diagnoses is shown with an asterisk, and the revisions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis.

*25060	34581	34551	34591	34510	34510	40311	40493
34501	34591	34561	7803	34511	34511	40391	*40290
34510	7803	34571	*34570	3452	34541	40400	40300
34511	*34511	34581	34501	3453	34551	40401	40301
34541	34501	34591	34510	34541	34561	40402	40311
34551	34510	7803	34511	34551	34571	40403	40391
34561	34511	*34550	3452	34561	34581	40411	40400
34571	3452	34501	3453	34571	34591	40412	40401
34581	3453	34510	34541	34581	*4010	40413	40402
34591	34541	34511	34551	34591	40300	40491	40403
*25061	34551	3452	34561	7803	40301	40492	40411
34501	34561	3453	34571	*34591	40311	40493	40412
34510	34571	34541	34581	34501	40391	*40201	40413
34511	34581	34551	34591	34510	40400	40300	40491
34541	34591	34561	7803	34511	40401	40301	40492
34551	7803	34571	*34571	3452	40402	40311	40493
34561	*3452	34581	34501	3453	40403	40391	*40291
34571	34501	34591	34510	34541	40411	40400	40300
34581	34510	7803	34511	34551	40412	40401	40301
34591	34511	*34551	3452	34561	40413	40402	40311
*34500	34541	34501	3453	34571	40491	40403	40391
34501	34551	34510	34541	34581	40492	40411	40400
34510	34561	34511	34551	34591	40493	40412	40401
34511	34571	3452	34561	7803	*4011	40413	40402
3452	34581	3453	34571	*3488	40300	40491	40403
3453	34591	34541	34581	34501	40301	40492	40411
34541	*3453	34551	34591	34510	40311	40493	40412
34551	34501	34561	7803	34511	40391	*40210	40413
34561	34510	34571	*34580	34541	40400	40300	40491
34571	34511	34581	34501	34551	40401	40301	40492
34581	34541	34591	34510	34561	40402	40311	40493
34591	34551	7803	34511	34571	40403	40391	*40300
7803	34561	*34560	3452	34581	40411	40400	4010
*34501	34571	34501	3453	34591	40412	40401	40200
34501	34581	34510	34541	*3489	40413	40402	40201
34510	34591	34511	34551	34501	40491	40403	40211
34511	*34540	3452	34561	34510	40492	40411	40291
3452	34501	3453	34571	34511	40493	40412	40300
3453	34510	34541	34581	34541	*4019	40413	40301
34541	34511	34551	34591	34551	40300	40491	40311
34551	3452	34561	7803	34561	40301	40492	40391
34561	3453	34571	*34581	34571	40311	40493	40400
34571	34541	34581	34501	34581	40391	*40211	40401
34581	34551	34591	34510	34591	40400	40300	40402
34591	34561	7803	34511	*34989	40401	40301	40403
7803	34571	*34561	3452	34501	40402	40311	40411
*34510	34581	34501	3453	34510	40403	40391	40412
34501	34591	34510	34541	34511	40411	40400	40413
34510	7803	34511	34551	34541	40412	40401	40491
34511	*34541	3452	34561	34551	40413	40402	40492
3452	34501	3453	34571	34561	40491	40403	40493
3453	34510	34541	34581	34571	40492	40411	40501
34541	34511	34551	34591	34581	40493	40412	40509
34551	3452	34561	7803	34591	*40200	40413	*40301
34561	3453	34571	*34590	*3499	40300	40491	4010
34571	34541	34581	34501	34501	40301	40492	40200

40201	40412	40291	40491	40301	40493	40391	40401
40211	40413	40300	40492	40311	40501	40400	40402
40291	40491	40301	40493	40391	40509	40401	40403
40300	40492	40311	40501	40400	*40490	40402	40411
40301	40493	40391	40509	40401	4010	40403	40412
40311	40501	40400	*40403	40402	40200	40411	40413
40391	40509	40401	4010	40403	40201	40412	40491
40400	*40390	40402	40200	40411	40211	40413	40492
40401	4010	40403	40201	40412	40291	40491	40493
40402	40200	40411	40211	40413	40300	40492	*40511
40403	40201	40412	40291	40491	40301	40493	40300
40411	40211	40413	40300	40492	40311	40501	40301
40412	40291	40491	40301	40493	40391	40509	40311
40413	40300	40492	40311	40501	40400	*40493	40391
40491	40301	40493	40391	40509	40401	4010	40400
40492	40311	40501	40400	*40412	40402	40200	40401
40493	40391	40509	40401	4010	40403	40201	40402
40501	40400	*40401	40402	40200	40411	40211	40403
40509	40401	4010	40403	40201	40412	40291	40411
*40310	40402	40200	40411	40211	40413	40300	40412
4010	40403	40201	40412	40291	40491	40301	40413
40200	40411	40211	40413	40300	40492	40311	40491
40201	40412	40291	40491	40301	40493	40391	40492
40211	40413	40300	40492	40311	40501	40400	40493
40291	40491	40301	40493	40391	40509	40401	*40519
40300	40492	40311	40501	40400	*40491	40402	40300
40301	40493	40391	40509	40401	4010	40403	40301
40311	40501	40400	*40410	40402	40200	40411	40311
40391	40509	40401	4010	40403	40201	40412	40391
40400	*40391	40402	40200	40411	40211	40413	40400
40401	4010	40403	40201	40412	40291	40491	40401
40402	40200	40411	40211	40413	40300	40492	40402
40403	40201	40412	40291	40491	40301	40493	40403
40411	40211	40413	40300	40492	40311	40501	40411
40412	40291	40491	40301	40493	40391	40509	40412
40413	40300	40492	40311	40501	40400	*40501	40413
40491	40301	40493	40391	40509	40401	40300	40491
40492	40311	40501	40400	*40413	40402	40301	40492
40493	40391	40509	40401	4010	40403	40311	40493
40501	40400	*40402	40402	40200	40411	40391	*40591
40509	40401	4010	40403	40201	40412	40400	40300
*40311	40402	40200	40411	40211	40413	40401	40301
4010	40403	40201	40412	40291	40491	40402	40311
40200	40411	40211	40413	40300	40492	40403	40391
40201	40412	40291	40491	40301	40493	40411	40400
40211	40413	40300	40492	40311	40501	40412	40401
40291	40491	40301	40493	40391	40509	40413	40402
40300	40492	40311	40501	40400	*40492	40491	40403
40301	40493	40391	40509	40401	4010	40492	40411
40311	40501	40400	*40411	40402	40200	40493	40412
40391	40509	40401	4010	40403	40201	*40509	40413
40400	*40400	40402	40200	40411	40211	40300	40491
40401	4010	40403	40201	40412	40291	40301	40492
40402	40200	40411	40211	40413	40300	40311	40493
40403	40201	40412	40291	40491	40301	40391	*40599
40411	40211	40413	40300	40492	40311	40400	40300

40301	41081	4130	41011	41061	41181	*41061	41041
40311	41091	4131	41021	41071	41189	41001	41051
40391	4111	4139	41031	41081	4130	41011	41061
40400	41181	*41020	41041	41091	4131	41021	41071
40401	41189	41001	41051	4111	4139	41031	41081
40402	4130	41011	41061	41181	*41051	41041	41091
40403	4131	41021	41071	41189	41001	41051	4111
40411	4139	41031	41081	4130	41011	41061	41181
40412	*41010	41041	41091	4131	41021	41071	41189
40413	41001	41051	4111	4139	41031	41081	4130
40491	41011	41061	41181	*41041	41041	41091	4131
40492	41021	41071	41189	41001	41051	4111	4139
40493	41031	41081	4130	41011	41061	41181	*41072
*41000	41041	41091	4131	41021	41071	41189	41001
41001	41051	4111	4139	41031	41081	4130	41011
41011	41061	41181	*41031	41041	41091	4131	41021
41021	41071	41189	41001	41051	4111	4139	41031
41031	41081	4130	41011	41061	41181	*41062	41041
41041	41091	4131	41021	41071	41189	41001	41051
41051	4111	4139	41031	41081	4130	41011	41061
41061	41181	*41021	41041	41091	4131	41021	41071
41071	41189	41001	41051	4111	4139	41031	41081
41081	4130	41011	41061	41181	*41052	41041	41091
41091	4131	41021	41071	41189	41001	41051	4111
4111	4139	41031	41081	4130	41011	41061	41181
41181	*41011	41041	41091	4131	41021	41071	41189
41189	41001	41051	4111	4139	41031	41081	4130
4130	41011	41061	41181	*41042	41041	41091	4131
4131	41021	41071	41189	41001	41051	4111	4139
4139	41031	41081	4130	41011	41061	41181	*41080
*41001	41041	41091	4131	41021	41071	41189	41001
41001	41051	4111	4139	41031	41081	4130	41011
41011	41061	41181	*41032	41041	41091	4131	41021
41021	41071	41189	41001	41051	4111	4139	41031
41031	41081	4130	41011	41061	41181	*41070	41041
41041	41091	4131	41021	41071	41189	41001	41051
41051	4111	4139	41031	41081	4130	41011	41061
41061	41181	*41022	41041	41091	4131	41021	41071
41071	41189	41001	41051	4111	4139	41031	41081
41081	4130	41011	41061	41181	*41060	41041	41091
41091	4131	41021	41071	41189	41001	41051	4111
4111	4139	41031	41081	4130	41011	41061	41181
41181	*41012	41041	41091	4131	41021	41071	41189
41189	41001	41051	4111	4139	41031	41081	4130
4130	41011	41061	41181	*41050	41041	41091	4131
4131	41021	41071	41189	41001	41051	4111	4139
4139	41031	41081	4130	41011	41061	41181	*41081
*41002	41041	41091	4131	41021	41071	41189	41001
41001	41051	4111	4139	41031	41081	4130	41011
41011	41061	41181	*41040	41041	41091	4131	41021
41021	41071	41189	41001	41051	4111	4139	41031
41031	41081	4130	41011	41061	41181	*41071	41041
41041	41091	4131	41021	41071	41189	41001	41051
41051	4111	4139	41031	41081	4130	41011	41061
41061	41181	*41030	41041	41091	4131	41021	41071
41071	41189	41001	41051	4111	4139	41031	41081

41091	4131	*4220	4290	*45989	42971	49321	*53321
4111	4139	42971	4294	40300	42979	*49391	9981
41181	*41092	42979	4295	40301	*4911	49320	*53340
41189	41001	*42290	4296	40311	49320	49321	9981
4130	41011	42971	42971	40391	49321	*5178	*53341
4131	41021	42979	42979	40400	*4912	49320	9981
4139	41031	*42291	42981	40401	49320	49321	*53360
*41082	41041	42971	42982	40402	49321	*51889	9981
41001	41051	42979	7450	40403	*4918	49320	*53361
41011	41061	*42292	74510	40411	49320	49321	9981
41021	41071	42971	74511	40412	49321	*5198	*53400
41031	41081	42979	74512	40413	*4919	49320	9981
41041	41091	*42293	74519	40491	49320	49321	*53401
41051	4111	42971	7452	40492	49321	*5199	9981
41061	41181	42979	7453	40493	*4920	49320	*53420
41071	41189	*42299	7454	41001	49320	49321	9981
41081	4130	42971	74560	41011	49321	*5308	*53421
41091	4131	42979	74569	41021	*4928	9981	9981
4111	4139	*42789	7457	41031	49320	*53100	*53440
41181	*4110	4260	*42979	41041	49321	9981	9981
41189	41181	42612	3980	41051	*49300	*53101	*53441
4130	41189	42613	4220	41061	49320	9981	9981
4131	*4111	42653	42290	41071	49321	*53120	*53460
4139	41181	42654	42291	41081	*49301	9981	9981
*41090	41189	4266	42292	41091	49320	*53121	*53461
41001	*41181	4267	42293	41181	49321	9981	9981
41011	4110	42681	42299	41189	*49310	*53140	*5350
41021	4111	42689	4290	42971	49320	9981	9981
41031	41181	4269	4294	42979	49321	*53141	*5693
41041	41189	4270	4295	*4599	*49311	9981	9981
41051	4130	4271	4296	40300	49320	*53160	*5780
41061	4131	4272	42971	40301	49321	9981	9981
41071	4139	42731	42979	40311	*49320	*53161	*5781
41081	*41189	42732	42981	40391	4911	9981	9981
41091	4110	42741	42982	40400	4912	*53200	*5789
4111	4111	42742	7450	40401	4918	9981	9981
41181	41181	*4290	74510	40402	4919	*53201	*7450
41189	41189	42971	74511	40403	4928	9981	42971
4130	4130	42979	74512	40411	49301	*53220	42979
4131	4131	*4294	74519	40412	49311	9981	*74510
4139	4139	42971	7452	40413	49320	*53221	42971
*41091	*4130	42979	7453	40491	49321	9981	42979
41001	41181	*4295	7454	40492	49391	*53240	*74511
41011	41189	42971	74560	40493	*49321	9981	42971
41021	*4131	42979	74569	41001	4911	*53241	42979
41031	41181	*4296	7457	41011	4912	9981	*74512
41041	41189	42971	*42981	41021	4918	*53260	42971
41051	*4139	42979	42971	41031	4919	9981	42979
41061	41181	*42971	42979	41041	4928	*53261	*74519
41071	41189	3980	*42982	41051	49301	9981	42971
41081	*4148	4220	42971	41061	49311	*53300	42979
41091	41181	42290	42979	41071	49320	9981	*7452
4111	41189	42291	*4560	41081	49321	*53301	42971
41181	*4149	42292	9981	41091	49391	9981	42979
41189	41181	42293	*45620	41181	*49390	*53320	*7453
4130	41189	42299	9981	41189	49320	9981	42971

42979	7452	74684	99661	99665	*99659	99662	99659
*7454	7453	74686	99662	99669	99660	99669	99660
42971	7454	74711	99669	99670	99661	99670	99661
42979	74560	74722	99670	99676	99662	99671	99662
*7455	74569	*75989	99672	99679	99663	99672	99663
42971	7457	42971	99674	*99639	99664	99674	99664
42979	74601	42979	99679	99660	99665	99679	99665
*74560	74602	74100	*99602	99664	99666	*99663	99666
42971	7461	74101	99660	99665	99667	9962	99667
42979	7462	74102	99661	99669	99669	99660	99669
*74561	7463	74103	99662	99670	99670	99663	99670
42971	7464	74190	99669	99676	99671	99669	99671
42979	7465	74191	99670	99679	99672	99670	99672
*74569	7466	74192	99671	*9964	99673	99675	99673
42971	7467	74193	99672	99660	99674	99679	99674
42979	74681	7450	99674	99666	99675	*99664	99675
*7457	74682	74510	99679	99667	99676	99630	99676
42971	74683	74511	*99603	99669	99677	99639	99677
42979	74684	74512	99660	99670	99678	99660	99678
*7458	74686	74519	99661	99677	99679	99664	99679
42971	74711	7452	99662	99678	*99660	99665	*99670
42979	74722	7453	99669	99679	99659	99669	99600
*7459	*75982	7454	99670	*99651	99660	99670	99659
42971	42971	74560	99674	99660	99661	99676	99660
42979	42979	74569	99679	99669	99662	99679	99661
*74689	74100	7457	*99609	99670	99663	*99665	99662
42971	74101	74601	99660	99679	99664	99630	99663
42979	74102	74602	99661	*99652	99665	99639	99664
*7469	74103	7461	99662	99660	99666	99660	99665
42971	74190	7462	99669	99661	99667	99664	99666
42979	74191	7463	99670	99662	99669	99665	99667
*74789	74192	7464	99671	99663	99670	99669	99669
42971	74193	7465	99672	99665	99671	99670	99670
42979	7450	7466	99674	99666	99672	99676	99671
*7479	74510	7467	99679	99667	99673	99679	99672
42971	74511	74681	*9961	99669	99674	*99666	99673
42979	74512	74682	99660	99670	99675	9964	99674
*7597	74519	74683	99661	99671	99676	99660	99675
42971	7452	74684	99662	99672	99677	99666	99676
42979	7453	74686	99669	99673	99678	99667	99677
*75981	7454	74711	99670	99674	99679	99669	99678
42971	74560	74722	99671	99675	*99661	99670	99679
42979	74569	*7724	99672	99676	99600	99677	*99671
74100	7457	9981	99673	99677	99660	99678	99600
74101	74601	*99600	99674	99678	99661	99679	99660
74102	74602	99660	99679	99679	99662	*99667	99661
74103	7461	99661	*9962	*99653	99669	9964	99662
74190	7462	99662	99660	99660	99670	99660	99669
74191	7463	99669	99663	99669	99671	99666	99670
74192	7464	99670	99669	99670	99672	99667	99671
74193	7465	99671	99670	99679	99674	99669	99672
7450	7466	99672	99675	*99654	99679	99670	99674
74510	7467	99674	99679	99660	*99662	99677	99679
74511	74681	99679	*99630	99669	99600	99678	*99672
74512	74682	*99601	99660	99670	99660	99679	99600
74519	74683	99660	99664	99679	99661	*99669	99660

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Table 6q --Deletions to the CC Exclusions List

CCs that are deleted from the list are in Table 6g--Deletions to the CC Exclusions List. Each of the principal diagnoses is shown with an asterisk, and the revisions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis.

*25060	*3488	4010	4040	4106	4139	4139	*4262
3451	3451	40200	*4100	4107	*4107	*4130	42610
*25061	*3489	40201	4100	4108	4100	4118	42611
3451	3451	40211	4101	4109	4101	*4131	4262
*25080	*34989	40291	4102	4111	4102	4118	4263
3451	3451	4030	4103	4118	4103	*4139	4264
*25081	*3499	4040	4104	4130	4104	4118	42650
3451	3451	40501	4105	4131	4105	*4148	42651
*25090	*4010	40509	4106	4139	4106	4118	42652
3451	4030	*4040	4107	*4104	4107	*4149	*4263
*25091	4040	4010	4108	4100	4108	4118	42610
3451	*4011	40200	4109	4101	4109	*4260	42611
*3450	4030	40201	4111	4102	4111	42610	4262
3451	4040	40211	4118	4103	4118	42611	4263
3452	*4019	40291	4130	4104	4130	4262	4264
3453	4030	4030	4131	4105	4131	4263	42650
7803	4040	4040	4139	4106	4139	4264	42651
*3451	*40200	40501	*4101	4107	*4108	42650	42652
3451	4030	40509	4100	4108	4100	42651	*4264
3452	4040	*4041	4101	4109	4101	42652	42610
3453	*40201	4010	4102	4111	4102	*42610	42611
7803	4030	40200	4103	4118	4103	42610	4262
*3452	4040	40201	4104	4130	4104	42611	4263
3451	*40210	40211	4105	4131	4105	4262	4264
*3453	4030	40291	4106	4139	4106	4263	42650
3451	4040	4030	4107	*4105	4107	4264	42651
*3454	*40211	4040	4108	4100	4108	42650	42652
3451	4030	40501	4109	4101	4109	42651	*42650
3452	4040	40509	4111	4102	4111	42652	42610
3453	*40290	*4049	4118	4103	4118	*42611	42611
7803	4030	4010	4130	4104	4130	42610	4262
*3455	4040	40200	4131	4105	4131	42611	4263
3451	*40291	40201	4139	4106	4139	4262	4264
3452	4030	40211	*4102	4107	*4109	4263	42650
3453	4040	40291	4100	4108	4100	4264	42651
7803	*4030	4030	4101	4109	4101	42650	42652
*3456	4010	4040	4102	4111	4102	42651	*42651
3451	40200	40501	4103	4118	4103	42652	42610
3452	40201	40509	4104	4130	4104	*42612	42611
3453	40211	*40501	4105	4131	4105	42610	4262
7803	40291	4030	4106	4139	4106	42611	4263
*3457	4030	4040	4107	*4106	4107	4262	4264
3451	4040	*40509	4108	4100	4108	4263	42650
3452	40501	4030	4109	4101	4109	4264	42651
3453	40509	4040	4111	4102	4111	42650	42652
7803	*4031	*40511	4118	4103	4118	42651	*42652
*3458	4010	4030	4130	4104	4130	42652	42610
3451	40200	4040	4131	4105	4131	*42613	42611
3452	40201	*40519	4139	4106	4139	42610	4262
3453	40211	4030	*4103	4107	*4111	42611	4263
7803	40291	4040	4100	4108	4118	4262	4264
*3459	4030	*40591	4101	4109	*4118	4263	42650
3451	4040	4030	4102	4111	4111	4264	42651
3452	40501	4040	4103	4118	4118	42650	42652
3453	40509	*40599	4104	4130	4130	42651	*42653
7803	*4039	4030	4105	4131	4131	42652	42610

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TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
001	26393	19.5380	5	8	14	23	39
002	5618	20.1499	4	7	13	24	42
003	4	22.0000	12	12	12	32	32
004	4759	17.2820	4	7	12	21	34
005	48161	7.9049	3	4	6	9	15
006	1798	2.9082	1	1	2	3	6
007	6040	26.0570	3	6	13	27	59
008	4072	5.1790	1	2	3	6	11
009	2082	11.5034	2	4	7	13	24
010	18394	11.6908	2	4	8	15	24
011	4887	7.1078	1	3	5	9	14
012	24527	10.9543	2	4	7	12	20
013	5285	9.4102	3	4	8	11	16
014	326880	10.8496	3	5	8	13	21
015	150820	5.6343	2	3	4	7	10
016	13631	9.7055	3	4	7	11	19
017	5503	6.4923	2	3	5	8	12
018	12970	9.1760	2	4	6	11	18
019	10395	5.7537	1	2	4	7	12
020	6076	12.3168	2	5	9	15	25
021	781	10.6274	3	5	7	13	20
022	11966	5.7956	2	3	4	7	11
023	4070	6.8482	1	3	5	8	13
024	49400	7.8494	2	3	5	9	15
025	27296	4.7074	1	2	4	6	9
026	50	4.9400	1	2	3	6	9
027	2743	9.6952	1	1	5	12	22
028	7018	10.0865	1	3	6	12	21
029	4560	5.1252	1	2	3	6	11
030	1	1.0000	1	1	1	1	1
031	4389	6.7268	1	2	4	8	13
032	4517	3.8123	1	2	3	5	8
034	12229	9.5245	2	3	6	11	18
035	4852	5.5517	1	2	4	7	10
036	21527	3.1004	1	2	3	4	5
037	3212	4.7883	1	2	3	5	10
038	1288	2.9852	1	1	2	3	6
039	27706	2.0235	1	1	2	2	3
040	5232	3.1047	1	1	2	3	7
041	1	2.0000	2	2	2	2	2
042	24436	3.0432	1	1	2	3	5
043	327	4.5260	2	2	4	6	8
044	2326	6.7975	3	4	6	8	12
045	3221	4.3735	1	2	3	6	8
046	3356	5.9839	1	2	4	7	12
047	3101	3.9000	1	1	2	5	8
048	1	12.0000	12	12	12	12	12
049	7510	15.7061	3	7	12	19	30
050	5682	2.9509	1	2	2	3	5
051	738	3.1992	1	1	2	3	6
052	174	4.5000	1	2	3	4	8

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
053	9210	3.2684	1	1	2	3	7
055	7887	2.7585	1	1	1	2	5
056	1429	2.5031	1	1	2	3	5
057	858	6.3998	1	2	3	7	14
059	285	2.3158	1	1	1	2	4
061	468	4.2244	1	1	2	4	10
062	1	2.0000	2	2	2	2	2
063	6462	7.6551	1	2	4	8	16
064	6336	9.6026	1	2	5	11	21
065	31177	4.1867	2	2	3	5	8
066	10667	4.1881	1	2	3	5	7
067	427	5.7237	2	3	4	7	11
068	17144	6.2170	2	3	5	7	11
069	7104	4.7479	2	3	4	6	8
070	21	4.0476	2	2	3	5	7
071	145	6.2000	2	3	4	7	11
072	800	5.1400	1	2	3	6	10
073	8610	6.0841	1	2	4	7	12
074	1	3.0000	3	3	3	3	3
075	30298	14.6712	6	8	11	18	27
076	31437	15.0462	6	7	11	18	29
077	4748	7.3307	1	2	5	10	15
078	27912	10.6460	4	7	10	13	17
079	103823	12.5184	4	6	10	15	23
080	13077	9.2054	3	5	7	11	16
081	9	12.3333	2	7	10	16	19
082	79189	9.6489	2	4	7	12	20
083	7552	8.7673	3	4	7	11	16
084	2520	5.1147	2	2	4	6	10
085	15288	9.1284	2	4	7	12	18
086	2504	5.1893	2	3	5	8	12
087	65065	8.7957	2	4	7	11	17
088	93063	7.9341	3	4	6	9	14
089	332395	9.1679	3	5	7	11	16
090	62797	6.7632	3	4	6	8	11
091	37	5.5676	2	3	5	7	11
092	8564	9.1665	3	4	7	11	17
093	2207	6.4676	3	3	5	8	12
094	8877	10.0266	3	5	8	12	20
095	1748	6.1061	2	3	5	8	12
096	208655	7.8624	3	4	6	9	13
097	50591	5.5878	2	3	5	7	10
098	14	8.3571	2	4	6	9	20
099	35981	6.0854	2	3	4	7	12
100	12505	3.5109	1	2	3	4	7
101	22367	7.4853	2	3	6	9	14
102	5689	4.7474	1	2	4	6	9
103	118	36.1271	11	16	30	46	71
104	11480	22.7637	10	13	18	26	40
105	12103	16.8642	8	10	12	18	30
106	62031	17.0455	9	11	14	19	27

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY90 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
107	41466	12.9983	7	8	10	14	20
108	5305	15.7840	5	9	12	18	29
109	11266	12.5097	1	4	9	16	26
110	68514	16.4622	6	9	12	19	31
111	18716	9.5400	5	7	9	11	15
112	103146	7.5528	2	3	5	9	15
113	33981	19.1795	6	9	14	22	37
114	8704	13.7146	3	6	10	17	27
115	5689	15.2164	6	9	13	18	26
116	47921	7.9448	2	4	6	10	15
117	5985	7.0964	2	3	5	9	14
118	10584	6.0233	1	2	4	7	13
119	4202	6.0157	1	2	3	7	14
120	23059	17.5548	3	6	12	22	37
121	139310	10.6542	4	7	9	13	18
122	125815	7.6534	2	5	7	10	13
123	66721	5.5788	1	1	3	7	14
124	86754	6.2676	1	2	5	8	13
125	106964	3.1223	1	1	2	4	7
126	3762	22.2517	5	10	19	31	43
127	530476	6.1277	3	4	6	10	15
128	31570	8.9660	4	6	8	11	14
129	8235	5.5132	1	1	2	7	13
130	60002	8.2147	2	4	7	10	15
131	30956	5.9191	1	2	5	8	11
132	17350	5.8205	2	3	4	7	11
133	7016	4.3007	1	2	3	5	8
134	36023	5.6856	2	3	4	7	10
135	7352	7.2087	2	3	5	8	14
136	1936	4.4003	1	2	3	5	8
137	2	3.0000	2	2	4	4	4
138	173867	6.3764	2	3	5	8	12
139	80336	4.2667	1	2	3	5	8
140	371768	4.8779	2	3	4	6	9
141	72875	5.8896	2	3	4	7	11
142	41214	4.1970	1	2	3	5	7
143	96969	3.6274	1	2	3	4	6
144	44108	7.8277	2	3	6	10	15
145	8234	4.5947	1	2	4	6	9
146	7466	16.2187	8	10	13	18	27
147	2799	10.7208	6	8	10	13	16
148	125312	17.7309	8	10	14	20	31
149	29140	10.8227	7	8	10	12	16
150	17687	15.2582	6	9	12	18	27
151	6914	9.2433	4	6	8	11	15
152	7793	9.8973	3	5	8	12	18
153	4078	7.3600	3	5	7	9	11
154	48511	17.6273	5	8	13	21	34
155	9022	9.6841	4	6	8	12	17
156	1	12.0000	12	12	12	12	12
157	25779	7.4432	2	3	5	9	14

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
158	21088	8.7491	1	2	3	5	7
159	13633	7.2501	2	3	6	9	13
160	15819	4.0824	1	2	4	5	7
161	32890	4.9269	1	2	3	6	10
162	47652	2.6429	1	1	2	3	5
163	28	5.0000	2	2	4	6	8
164	4270	12.9927	6	8	11	15	21
165	2872	8.2838	5	6	8	10	13
166	2531	8.5606	3	5	7	10	15
167	2774	4.9877	3	3	4	6	8
168	2359	6.3374	1	2	3	7	14
169	2622	3.1430	1	1	2	3	6
170	12505	16.9693	3	7	12	21	34
171	2385	8.3140	2	4	7	10	16
172	30622	10.6293	2	4	7	13	22
173	5414	6.0207	1	2	4	7	12
174	134572	7.2722	2	4	6	9	13
175	34740	4.8612	2	3	4	6	8
176	11915	7.8849	3	4	6	9	15
177	18417	6.4592	3	4	5	8	11
178	9311	4.8319	2	3	4	6	8
179	7321	9.9063	3	5	7	12	19
180	55665	7.9124	2	4	6	10	15
181	26584	5.0712	2	3	4	6	9
182	240706	6.4427	2	3	5	8	12
183	95154	4.5541	1	2	4	6	8
184	58	4.2759	1	2	3	5	9
185	4190	6.4174	1	2	4	8	13
186	2	2.0000	2	2	2	2	2
187	1756	3.2027	1	1	2	3	7
188	35974	7.5470	2	3	5	9	15
189	11765	4.2564	1	1	3	5	8
190	171	5.8246	2	3	4	7	13
191	7768	23.2084	7	11	17	28	45
192	1354	13.7260	6	8	11	16	23
193	13292	17.6045	8	10	14	21	31
194	2757	12.0022	5	8	10	15	20
195	22808	13.5967	7	8	11	16	22
196	4061	9.7080	5	7	9	12	15
197	60303	10.5198	5	6	9	12	18
198	40640	6.5438	4	4	6	8	10
199	3424	15.3823	5	8	12	19	29
200	2091	14.4974	3	6	10	18	29
201	4916	13.4493	2	5	9	17	28
202	14423	10.0648	2	4	8	12	20
203	29987	9.8767	2	4	7	13	20
204	33836	8.1114	3	4	6	10	15
205	19670	9.5919	2	4	7	12	19
206	3639	5.4086	1	2	4	7	11
207	35434	7.4519	2	4	6	9	14
208	17229	4.4990	1	2	4	5	8

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
209	206383	12.7093	7	9	11	14	19
210	92997	15.5039	7	9	12	17	26
211	45414	11.4867	6	8	10	13	17
212	11	8.0909	3	5	8	9	10
213	5373	13.9001	4	6	10	17	28
214	26992	13.9407	5	7	11	16	25
215	33568	8.7594	4	5	8	10	15
216	4877	13.8253	2	4	10	18	30
217	14593	23.0136	3	8	15	29	49
218	12381	11.0259	3	5	8	13	21
219	16882	6.4506	2	4	5	8	11
220	5	22.2000	4	4	5	7	90
221	3898	10.0103	2	4	7	12	20
222	7912	5.2380	1	2	4	7	11
223	15518	5.9844	2	3	4	7	11
224	8628	3.5778	1	2	3	4	6
225	14709	4.9118	1	2	3	5	11
226	4577	10.7927	2	4	7	13	23
227	8272	4.2736	1	2	3	5	9
228	5355	4.1692	1	2	3	4	8
229	4153	2.6418	1	1	2	3	5
230	2968	7.1055	1	2	4	8	15
231	6664	6.3776	1	2	3	7	14
232	740	7.1014	1	1	3	9	18
233	5854	12.4277	3	5	9	15	25
234	5094	6.1062	2	3	5	8	12
235	6500	13.8725	2	4	8	15	33
236	39756	10.0519	2	4	7	12	19
237	1820	6.1335	2	3	5	7	11
238	5438	14.4456	4	6	11	18	29
239	58886	10.3527	3	5	8	13	20
240	10718	9.7551	3	4	7	12	19
241	5816	6.4029	2	3	5	8	12
242	2321	11.5511	3	5	8	15	24
243	132108	6.9208	1	3	6	9	13
244	11491	7.6643	2	3	6	9	14
245	7970	5.6339	1	3	4	7	11
246	2170	6.0226	2	3	5	7	11
247	10137	5.0982	1	2	4	6	10
248	6839	5.9905	2	3	5	7	11
249	5649	6.3206	1	2	4	8	13
250	3725	6.8027	2	3	4	8	13
251	5004	3.4680	1	1	2	4	7
252	2	5.0000	3	3	7	7	7
253	16032	8.8883	2	3	6	10	17
254	16940	5.1848	1	2	4	6	10
255	1	2.0000	2	2	2	2	2
256	9057	5.6629	1	2	4	7	11
257	27872	6.5715	3	4	5	8	11
258	31986	4.8970	2	3	4	6	8
259	3411	7.5427	2	3	5	9	16

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
260	4268	3.3116	1	2	3	4	6
261	4371	3.0217	1	2	2	4	5
262	3513	2.6496	1	1	2	3	5
263	29386	22.5671	6	9	15	27	45
264	7028	13.6653	3	6	10	17	28
265	5411	10.9115	2	3	7	13	23
266	6464	4.8436	1	2	3	6	10
267	567	4.6349	1	1	2	5	9
268	1904	4.1686	1	1	2	4	9
269	9714	12.9413	2	5	9	16	27
270	6716	4.8691	1	2	3	6	10
271	17177	11.7595	3	6	8	14	22
272	6678	9.7549	3	5	7	12	19
273	3276	7.6947	2	4	6	9	15
274	4074	10.0751	2	3	7	12	21
275	734	6.5163	1	2	3	6	11
276	1140	5.0860	1	2	4	7	10
277	55693	9.0300	3	5	7	11	16
278	27739	6.7390	2	4	6	8	12
279	9	4.7778	2	2	4	6	6
280	13009	6.8689	2	3	5	8	13
281	9871	4.6046	1	2	3	6	9
283	6069	7.7860	2	3	6	9	15
284	3478	4.9687	1	2	4	6	10
285	3717	23.1560	6	10	16	28	45
286	1546	13.7419	6	7	10	16	26
287	7836	20.7377	5	8	13	23	42
288	515	11.7825	3	5	7	10	26
289	3793	6.9238	2	3	4	7	14
290	9094	4.6078	2	2	3	5	8
291	194	2.2474	1	1	2	3	4
292	5129	18.4075	4	8	13	22	35
293	966	8.9193	2	4	7	11	16
294	100709	7.6569	2	4	6	9	13
295	3211	6.1155	2	3	5	7	11
296	187031	8.7305	2	4	6	10	16
297	56224	5.7147	2	3	4	7	10
298	81	6.3333	1	2	4	6	11
299	929	7.8122	1	3	5	9	15
300	10826	9.6271	2	4	7	12	18
301	3020	6.0381	2	3	5	7	11
302	6147	18.2583	7	10	15	22	32
303	16087	14.9792	4	9	12	17	26
304	14727	14.6942	4	7	11	18	28
305	6079	7.7945	2	4	7	10	14
306	11581	10.2914	2	5	8	13	19
307	6133	5.6835	2	3	5	7	10
308	8579	10.3495	2	4	7	13	21
309	5039	4.9903	2	2	4	7	10
310	33668	6.3068	1	3	4	8	12
311	28035	3.1983	1	2	3	4	6

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
312	4100	5.9615	1	2	4	7	12
313	3153	3.2363	1	1	2	4	7
314	3	5.3333	2	2	3	11	11
315	27941	14.1597	2	4	9	17	30
316	39610	9.4892	2	4	7	12	19
317	1570	3.3949	1	1	2	4	6
318	7680	9.2819	2	3	6	12	20
319	1697	4.8338	1	1	3	5	9
320	143597	8.9053	3	5	7	10	15
321	39565	6.3620	3	4	5	8	11
322	73	5.6164	2	3	5	7	12
323	25738	4.2619	1	2	3	5	9
324	16484	2.8419	1	1	2	3	5
325	10962	6.1449	2	3	5	7	12
326	5742	4.0373	1	2	3	5	7
327	9	3.2222	1	1	3	4	4
328	1991	5.5932	1	2	4	7	11
329	696	2.9239	1	1	2	4	6
330	2	4.0000	3	3	5	5	5
331	26738	7.7409	2	3	6	10	16
332	9355	4.6817	1	2	3	6	10
333	369	7.4551	1	3	5	10	16
334	10381	11.8383	6	8	10	14	19
335	8532	8.9596	6	7	8	10	13
336	101077	7.0463	3	4	5	8	12
337	107610	4.6772	3	3	4	5	7
338	10581	5.6946	1	1	3	7	14
339	5582	4.2057	1	1	2	4	9
340	5	3.4000	3	3	3	4	4
341	16395	4.8483	1	3	4	6	8
342	853	3.2532	1	1	2	3	8
344	3589	7.2056	2	4	5	8	12
345	2275	5.9130	1	2	4	7	12
346	10297	8.4020	2	3	6	10	17
347	2380	3.6840	1	1	2	4	8
348	5556	5.6622	1	2	4	7	11
349	3909	2.9724	1	1	2	3	6
350	8998	6.0088	2	3	5	7	10
351	3	2.6667	1	1	2	5	5
352	1097	4.7101	1	2	3	5	9
353	2066	13.9429	6	8	11	16	25
354	7362	9.7275	5	6	8	11	16
355	7159	6.1084	4	5	6	7	9
356	29975	5.4894	3	4	5	7	8
357	6603	13.3951	6	7	10	16	24
358	15596	8.2002	4	5	7	9	13
359	27951	5.6877	4	4	5	6	8
360	4790	6.0562	1	2	4	7	13
361	462	4.5974	1	1	2	5	11
362	30	1.7333	1	1	1	2	2
363	4286	5.5485	1	2	3	5	11

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
364	4439	3.4246	1	1	2	4	7
365	3551	12.3616	3	5	8	15	26
366	5581	10.5356	2	3	7	13	23
367	1501	4.4350	1	1	3	5	9
368	1546	7.8396	3	4	6	9	14
369	3085	4.7822	1	2	3	6	9
370	467	8.3833	4	4	6	8	14
371	706	4.9093	3	4	4	5	6
372	278	4.2878	2	2	3	4	8
373	1849	2.5219	1	2	2	3	4
374	288	2.9063	2	2	3	3	4
375	7	9.5714	2	2	10	11	11
376	94	4.1702	1	2	3	4	8
377	30	7.7667	1	3	3	7	10
378	125	4.5600	3	3	4	5	7
379	244	2.6557	1	1	2	3	5
380	76	2.8553	1	1	2	3	5
381	295	2.2804	1	1	1	3	5
382	87	1.7586	1	1	1	1	3
383	737	4.9403	1	2	3	6	9
384	118	3.3644	1	1	2	4	7
385	4	20.7500	1	1	9	10	53
386	1	10.0000	10	10	10	10	10
389	26	12.9231	2	3	5	23	27
390	29	7.0345	1	1	5	7	16
391	1	7.0000	7	7	7	7	7
392	2555	16.5202	6	8	12	21	32
393	3	36.6667	7	7	9	94	94
394	2345	10.5527	1	3	6	12	23
395	73654	6.5835	1	3	5	8	13
396	53	2.4340	1	1	2	3	5
397	10330	7.7293	2	3	6	9	15
398	12239	9.1821	3	4	7	11	18
399	2737	5.9569	1	2	4	7	11
400	7960	15.1925	4	6	11	16	32
401	6383	15.5153	3	6	11	20	33
402	3682	6.1141	1	2	4	8	13
403	24380	12.3698	2	5	9	16	26
404	7384	6.6568	1	3	5	8	14
406	3939	16.1879	4	7	12	21	32
407	1764	8.3764	2	4	7	10	15
408	10842	6.7635	1	2	4	7	15
409	8347	10.6681	2	4	6	14	23
410	135537	3.4776	1	2	3	4	6
411	531	3.6817	1	1	3	5	8
412	373	2.9223	1	1	2	3	6
413	10418	11.1317	2	4	8	14	24
414	3575	7.1910	1	2	5	9	15
415	24941	21.7509	5	9	15	26	43
416	106864	10.6235	2	5	8	13	20
417	39	6.7436	2	4	6	7	14

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
418	11456	8.6144	3	4	7	11	16
419	15860	7.7882	2	4	6	9	15
420	4663	5.9445	2	3	5	7	11
421	14409	5.6390	2	3	4	7	10
422	102	4.8137	2	2	4	6	9
423	6363	11.6035	3	5	8	14	23
424	3422	24.1642	8	8	15	27	49
425	15991	6.5508	2	3	4	8	13
426	9476	8.0496	2	3	6	10	17
427	2127	8.2261	2	3	6	10	17
428	1254	10.6164	1	3	7	13	22
429	30633	12.3370	3	4	7	13	22
430	61090	12.8490	3	5	9	16	26
431	409	9.0611	2	3	6	11	18
432	637	7.8838	1	2	4	9	19
433	5209	5.0035	1	2	3	6	12
434	16479	8.4696	2	3	6	10	18
435	19606	7.4311	2	3	5	8	18
436	4221	15.9128	3	7	15	25	29
437	9335	17.2863	4	9	17	26	30
439	1242	13.3398	1	3	7	15	33
440	7491	17.6641	3	6	11	22	40
441	1006	4.5974	1	1	2	5	9
442	43407	9.9377	1	2	6	12	22
443	14365	6.5832	1	2	4	9	14
444	3860	7.2153	2	3	5	9	14
445	2789	5.1660	1	2	4	6	9
446	1	1.0000	1	1	1	1	1
447	2842	3.5943	1	1	3	4	7
448	1	2.0000	2	2	2	2	2
449	32433	6.4051	1	3	5	8	12
450	11012	3.9457	1	1	3	5	8
451	10	3.0000	1	2	3	4	5
452	23294	6.9297	1	3	5	8	14
453	10130	4.3681	1	2	3	5	9
454	5086	7.1891	1	2	5	8	15
455	1744	4.1726	1	2	3	5	8
456	240	13.3250	1	2	6	14	37
457	137	6.3066	1	1	1	8	17
458	1914	23.8072	5	10	18	30	48
459	1017	15.4798	3	6	10	19	33
460	2339	9.4361	2	4	7	11	18
461	8303	5.2579	1	1	2	5	12
462	6358	18.8877	5	9	16	25	36
463	9718	7.1176	2	3	5	9	14
464	3638	4.5709	1	2	3	6	9
465	838	2.7757	1	1	2	3	5
466	5112	5.2162	1	1	2	5	11
467	5171	4.1058	1	1	2	4	8
468	70101	19.5586	3	8	14	24	39
471	5027	17.8705	9	11	15	21	29

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V6.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
472	247	34.3441	1	11	26	46	70
473	8320	16.6238	2	4	10	25	40
474	12333	49.0676	14	24	38	59	92
475	37755	14.3742	2	6	11	18	28
476	11122	18.4035	8	11	15	21	31
477	39021	10.9720	1	3	8	13	22

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
001	26393	19.5380	5	8	14	23	39
002	5618	20.1499	4	7	13	24	42
003	4	22.0000	12	12	12	32	32
004	4759	17.2820	4	7	12	21	34
005	48161	7.9049	3	4	6	9	15
006	1798	2.9082	1	1	2	3	6
007	5919	26.4492	3	7	13	27	60
008	4172	5.2294	1	2	3	6	11
009	2082	11.5034	2	4	7	13	24
010	18271	11.7223	2	4	8	15	24
011	5010	7.1054	1	3	5	9	14
012	24527	10.9543	2	4	7	12	20
013	5285	9.4102	3	4	8	11	16
014	326677	10.8495	3	5	8	13	21
015	150819	5.6343	2	3	4	7	10
016	13375	9.7743	3	4	7	11	19
017	5759	6.4753	2	3	5	8	12
018	12667	9.2443	2	4	6	11	18
019	10698	5.7698	1	2	4	7	11
020	6076	12.3168	2	5	9	15	25
021	781	10.6274	3	5	7	13	20
022	11966	5.7956	2	3	4	7	11
023	4070	6.8482	1	3	5	8	13
024	48518	7.8992	2	3	5	9	15
025	28178	4.7199	1	2	4	6	9
026	50	4.9400	1	2	3	6	9
027	2743	9.6952	1	1	5	12	22
028	6866	10.1764	1	3	6	12	21
029	4712	5.1543	1	2	3	7	11
030	1	1.0000	1	1	1	1	1
031	4272	6.7900	1	2	4	8	13
032	4634	3.8276	1	2	3	5	8
034	12077	9.5785	2	3	6	11	19
035	5004	5.5420	1	2	4	7	10
036	21527	3.1004	1	2	3	4	5
037	3212	4.7883	1	2	3	5	10
038	1288	2.9852	1	1	2	3	6
039	27706	2.0235	1	1	2	2	3
040	5232	3.1047	1	1	2	3	7
041	1	2.0000	2	2	2	2	2
042	24436	3.0432	1	1	2	3	5
043	327	4.5260	2	2	4	6	8
044	2326	6.7975	3	4	6	8	12
045	3221	4.3735	1	2	3	6	8
046	3286	6.0110	1	2	4	7	12
047	3171	3.9180	1	1	2	5	8
048	1	12.0000	12	12	12	12	12
049	7510	15.7061	3	7	12	19	30
050	5682	2.9509	1	2	2	3	5
051	738	3.1992	1	1	2	3	6
052	174	4.5000	1	2	3	4	8

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
053	9210	3.2684	1	1	2	3	7
055	7887	2.7585	1	1	1	2	5
056	1429	2.5031	1	1	2	3	5
057	858	6.3998	1	2	3	7	14
059	285	2.3158	1	1	1	2	4
061	468	4.2244	1	1	2	4	10
062	1	2.0000	2	2	2	2	2
063	6462	7.6551	1	2	4	8	16
064	6336	9.6026	1	2	5	11	21
065	31177	4.1867	2	2	3	5	8
066	10667	4.1881	1	2	3	5	7
067	427	5.7237	2	3	4	7	11
068	16962	6.2289	2	3	5	7	11
069	7286	4.7569	2	3	4	6	8
070	21	4.0476	2	2	3	5	7
071	145	6.2000	2	3	4	7	11
072	800	5.1400	1	2	3	6	10
073	8610	6.0841	1	2	4	7	12
074	1	3.0000	3	3	3	3	3
075	30298	14.6712	6	8	11	18	27
076	31318	15.0711	3	7	11	18	29
077	4867	7.3589	1	2	5	10	15
078	27810	10.6433	4	7	10	13	17
079	102251	12.4639	4	6	10	15	23
080	13433	9.1756	3	5	7	11	16
081	9	12.3333	2	7	10	16	19
082	78996	9.6414	2	4	7	12	20
083	7411	8.7780	3	4	7	11	16
084	2630	5.1163	2	2	4	6	10
085	15170	9.1344	2	4	7	12	18
086	2590	6.1865	2	3	5	8	12
087	62174	8.5639	2	4	7	11	16
088	92668	7.8985	3	4	6	9	14
089	329031	9.1627	3	5	7	11	16
090	64772	6.7622	3	4	6	8	11
091	37	5.5676	2	3	5	7	11
092	8433	9.1432	3	4	7	11	17
093	2283	6.5239	2	3	5	8	12
094	8769	10.0091	3	5	7	12	19
095	1783	6.1408	2	3	5	8	12
096	206870	7.3590	3	4	6	9	13
097	51815	5.5904	2	3	5	7	10
098	14	8.3571	2	4	6	9	20
099	34943	6.1061	2	3	5	8	12
100	13329	3.5072	1	2	3	4	7
101	21802	7.4585	2	3	6	9	14
102	5857	4.7348	1	2	4	6	9
103	118	36.1271	11	16	30	46	71
104	11481	22.7631	10	13	18	26	40
105	12106	16.8611	8	10	12	18	30
106	62374	17.0252	9	11	14	19	27

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
107	41123	12.9954	7	8	10	14	20
108	5305	15.7840	5	9	12	18	29
109	11266	12.5097	1	4	9	16	26
110	67716	16.5443	6	9	12	19	31
111	19514	9.5384	5	7	9	11	15
112	103026	7.5448	2	3	5	9	15
113	33381	19.1795	6	9	14	22	37
114	8700	13.7086	3	6	10	17	27
115	5689	15.2164	6	9	13	18	26
116	47921	7.9448	2	4	6	10	15
117	6036	7.1345	2	3	5	9	14
118	10657	6.0992	1	2	4	7	14
119	4202	6.0157	1	2	3	7	14
120	23055	17.5566	3	6	12	22	37
121	139310	10.6542	4	7	9	13	18
122	125816	7.6534	2	5	7	10	13
123	66721	5.5788	1	1	3	7	14
124	86746	6.2676	1	2	5	8	13
125	106972	3.1225	1	1	2	4	7
126	3762	22.2517	5	10	19	31	43
127	530475	8.1277	3	4	6	10	15
128	31570	8.9660	4	6	8	11	14
129	8235	5.5132	1	1	2	7	18
130	59077	8.2419	2	4	7	10	15
131	31881	5.9353	1	2	5	8	11
132	16820	5.8470	2	3	4	7	11
133	7546	4.3484	1	2	3	5	8
134	36023	5.6856	2	3	4	7	10
135	7168	7.2609	2	3	5	8	14
136	2120	4.4575	1	2	3	6	8
137	2	3.0000	2	2	4	4	4
138	167635	6.4379	2	3	5	8	12
139	86567	4.2995	1	2	3	5	8
140	371767	4.8779	2	3	4	6	9
141	69569	5.9663	2	3	4	7	11
142	44520	4.2030	1	2	3	5	7
143	96967	3.6274	1	2	3	4	6
144	43486	7.8698	2	3	6	10	15
145	8855	4.6141	1	2	4	6	9
146	7366	16.2954	8	10	13	19	27
147	2898	10.7129	6	8	10	13	16
148	124407	17.7823	8	10	14	20	31
149	30042	10.8174	7	8	10	12	16
150	17463	15.3379	6	9	12	18	27
151	7138	9.2369	4	6	8	11	15
152	7700	9.9151	3	5	8	12	18
153	4171	7.3838	3	5	7	9	12
154	48240	17.6732	5	8	13	21	34
155	9311	9.5837	4	6	8	12	17
156	1	12.0000	12	12	12	12	12
157	25216	7.5158	2	3	6	9	14

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
158	21651	3.7607	1	2	3	5	7
159	13104	7.3636	2	4	6	9	13
160	16348	4.0938	1	2	4	5	7
161	30949	5.0507	1	2	4	6	10
162	49593	2.6550	1	1	2	3	5
163	28	5.0000	2	2	4	6	8
164	4199	13.0753	6	8	11	15	21
165	2943	8.2796	5	6	8	10	13
166	2455	8.6729	3	5	7	10	15
167	2850	4.9863	3	3	4	6	8
168	2284	6.4440	1	2	3	7	14
169	2697	3.1416	1	1	2	3	6
170	12456	17.0006	3	7	12	21	34
171	2433	8.3358	2	4	7	11	16
172	30521	10.6446	2	4	7	13	22
173	5513	6.0172	1	2	4	7	12
174	133650	7.2856	2	4	6	9	13
175	35661	4.8730	2	3	4	6	8
176	11915	7.8849	3	4	6	9	15
177	18088	6.4917	3	4	5	8	11
178	9639	4.8268	2	3	4	6	8
179	7321	9.9063	3	5	7	12	19
180	54960	7.9453	2	4	6	10	15
181	27289	5.0783	2	3	4	6	9
182	237569	6.4689	2	3	5	8	12
183	98286	4.5508	1	2	4	6	8
184	58	4.2759	1	2	3	5	9
185	4190	6.4174	1	2	4	8	13
186	2	2.0000	2	2	2	2	2
187	1756	3.2027	1	1	2	3	7
188	35692	7.5718	2	3	5	9	15
189	12047	4.2600	1	1	3	5	9
190	171	5.8246	2	3	4	7	13
191	8349	22.4912	7	11	17	28	44
192	1627	12.6023	4	7	10	15	22
193	13114	17.6609	8	10	14	21	31
194	2795	12.0376	5	8	11	15	20
195	22447	13.6038	7	8	11	16	22
196	4186	9.7217	5	7	9	12	15
197	58921	10.5945	5	6	9	12	18
198	41986	6.5652	4	5	6	8	10
199	3424	15.3823	5	8	12	19	29
200	2082	14.4909	3	6	10	18	29
201	4913	13.4492	2	5	9	17	28
202	14421	10.0647	2	4	8	12	20
203	29953	9.8765	2	4	7	13	20
204	83797	8.1109	3	4	6	10	15
205	19611	9.5992	2	4	7	12	19
206	3698	5.4367	1	2	4	7	11
207	34546	7.4960	2	4	6	9	14
208	17772	4.5028	1	2	4	6	8

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
209	210326	12.6269	7	9	11	14	19
210	90822	15.5945	7	9	12	17	26
211	47555	11.4920	6	8	10	13	17
212	11	8.0909	3	5	8	9	10
213	5373	13.9001	4	6	10	17	28
214	25604	13.9871	5	8	11	16	25
215	34541	8.7520	4	5	8	10	15
216	5283	14.6150	2	5	11	19	31
217	14593	23.0136	3	8	15	29	49
218	11815	11.1724	3	5	8	13	21
219	17286	6.4655	2	4	5	8	11
220	5	22.2000	4	4	5	7	90
221	3628	10.2530	2	4	8	13	21
222	8182	5.2878	1	2	4	7	11
223	11533	5.3273	2	2	4	6	10
224	8842	3.5939	1	2	3	4	6
225	14711	4.9119	1	2	3	5	11
226	4415	11.0168	2	4	7	14	23
227	8449	4.2822	1	2	3	5	9
228	5270	4.1958	1	2	3	4	8
229	4250	2.6398	1	1	2	3	5
230	2968	7.1055	1	2	4	8	15
231	6677	6.3731	1	2	3	7	14
232	741	7.0931	1	1	3	9	18
233	5737	12.6557	3	5	9	16	25
234	6260	6.1371	2	3	5	8	12
235	6500	13.8725	2	4	8	15	33
236	39756	10.0519	2	4	7	12	19
237	1820	6.1335	2	3	5	7	11
238	5438	14.4456	4	6	11	18	29
239	58886	10.3527	3	5	8	13	20
240	10581	9.8037	3	4	7	12	19
241	5953	6.3936	2	3	5	8	12
242	2321	11.5511	3	5	8	15	24
243	132107	6.9207	1	3	6	9	13
244	11247	7.7017	2	3	6	9	14
245	8214	5.6429	1	3	4	7	11
246	2170	6.0226	2	3	5	7	11
247	10137	5.0982	1	2	4	6	10
248	6839	5.9905	2	3	5	7	11
249	5649	6.3206	1	2	4	8	13
250	3606	6.8838	2	3	5	8	13
251	5123	3.4884	1	1	2	4	7
252	2	5.0000	3	3	7	7	7
253	15604	8.9732	2	3	6	10	17
254	17368	5.1997	1	2	4	6	10
255	1	2.0000	2	2	2	2	2
256	9057	5.6629	1	2	4	7	11
257	27154	6.6060	3	4	6	8	11
258	32704	4.9051	2	3	5	6	8
259	3325	7.6406	2	3	5	9	16

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
260	4354	3.3204	1	2	3	4	6
261	4371	3.0217	1	2	2	4	5
262	3513	2.6496	1	1	2	3	5
263	29197	22.6294	5	9	15	27	45
264	7217	13.6464	3	6	10	17	28
265	5231	11.1158	2	3	7	13	23
266	6644	4.8471	1	2	3	6	10
267	567	4.6349	1	1	2	5	9
268	1904	4.1686	1	1	2	4	9
269	9562	13.0580	2	5	9	16	27
270	6868	4.8853	1	2	3	6	10
271	17177	11.7595	3	6	8	14	22
272	6604	9.7845	3	5	7	12	19
273	3350	7.6818	2	4	6	9	15
274	4057	10.0961	2	3	7	12	21
275	751	6.4834	1	2	3	6	11
276	1140	5.0860	1	2	4	7	10
277	55017	9.0486	3	5	7	11	16
278	28415	6.7576	3	4	6	8	12
279	9	4.7778	2	2	4	6	6
280	12755	6.9157	2	3	5	8	13
281	10125	4.6024	1	2	3	6	9
283	5978	7.8113	2	3	6	9	15
284	3569	4.9980	1	2	4	6	10
285	3717	23.1560	6	10	16	28	45
286	1546	13.7419	6	7	10	16	26
287	7836	20.7377	5	8	13	23	42
288	515	11.7825	3	5	7	10	26
289	3793	6.9238	2	3	4	7	14
290	9094	4.6078	2	2	3	5	8
291	194	2.2474	1	1	2	3	4
292	5100	18.4582	4	8	13	22	35
293	996	8.9337	2	4	7	11	16
294	100709	7.6569	3	4	6	9	13
295	3211	6.1155	2	3	5	7	11
296	184385	8.7756	2	4	6	10	17
297	58865	5.7073	2	3	4	7	10
298	81	6.3333	1	2	4	6	11
299	929	7.3122	1	3	5	9	15
300	10709	9.6661	3	4	7	12	18
301	3137	6.0389	2	3	5	7	11
302	6147	18.2583	8	10	15	22	32
303	16087	14.9792	7	9	12	17	26
304	14576	14.7610	4	7	11	18	28
305	6230	7.8053	2	4	7	10	14
306	11334	10.3893	3	5	8	13	19
307	6380	5.6881	2	3	5	7	10
308	8401	10.4666	2	4	7	13	21
309	5217	4.9845	1	2	4	7	10
310	32686	6.4000	2	3	4	8	13
311	29017	3.1986	1	2	3	4	6

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
312	3985	6.0339	1	2	4	7	12
313	3268	3.2439	1	1	2	4	7
314	3	5.3333	2	2	3	11	11
315	27941	14.1597	2	4	9	17	30
316	39610	9.4892	2	4	7	12	19
317	1570	3.3949	1	1	2	4	6
318	7642	9.3037	2	3	6	12	20
319	1735	4.8352	1	1	3	5	9
320	142516	8.9238	3	5	7	10	16
321	40646	6.3645	3	4	5	8	11
322	73	5.6164	2	3	5	7	12
323	25434	4.2737	1	2	3	5	9
324	16788	2.8498	1	1	2	4	5
325	10856	6.1584	2	3	5	7	12
326	5848	4.0503	1	2	3	5	7
327	9	3.2222	1	1	3	4	4
328	1974	5.6125	1	2	4	7	11
329	713	2.9341	1	1	2	4	6
330	2	4.0000	3	3	5	5	5
331	26516	7.7600	2	3	6	10	16
332	9577	4.6997	1	2	3	6	10
333	369	7.4851	1	3	5	10	16
334	10075	11.9201	6	8	10	14	19
335	8838	8.9659	6	7	8	10	13
336	96567	7.1506	3	4	6	8	12
337	112120	4.6827	3	3	4	5	7
338	10581	5.6946	1	1	3	7	14
339	5582	4.2057	1	1	2	4	9
340	5	3.4000	3	3	3	4	4
341	16395	4.8483	1	3	4	6	8
342	853	3.2532	1	1	2	3	6
344	3589	7.2056	2	4	5	8	12
345	2275	5.9130	1	2	4	7	12
346	10239	8.4334	2	3	6	10	17
347	2438	3.6641	1	1	2	4	8
348	5439	5.7143	1	2	4	7	11
349	4026	2.9801	1	1	2	3	6
350	8998	6.0088	2	3	5	7	10
351	3	2.6667	1	1	2	3	5
352	1097	4.7101	1	2	3	5	9
353	2066	13.9429	6	8	11	16	25
354	7210	9.7942	5	6	8	11	16
355	7311	6.1179	4	5	6	7	9
356	29975	5.4394	3	4	5	7	8
357	6603	13.3951	6	7	10	16	24
358	15048	8.2814	4	5	7	9	14
359	28499	5.6932	4	4	5	6	8
360	4790	6.0562	1	2	4	7	13
361	462	4.5974	1	1	2	5	11
362	30	1.7333	1	1	1	2	2
363	4286	5.5485	1	2	3	5	11

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
364	4439	3.4246	1	1	2	4	7
365	3551	12.3616	3	5	8	15	26
366	5564	10.5566	2	3	7	13	23
367	1518	4.4262	1	1	3	5	9
368	1546	7.6396	3	4	6	9	14
369	3085	4.7822	1	2	3	6	9
370	466	8.3927	4	4	6	8	14
371	705	4.9106	3	4	4	5	7
372	278	4.2878	2	2	3	4	8
373	1849	2.5219	1	2	2	3	4
374	289	2.8997	2	2	3	3	4
375	7	9.5714	2	2	10	11	11
376	94	4.1702	1	2	3	4	8
377	30	7.7667	1	1	3	7	10
378	125	4.5600	3	3	4	5	7
379	244	2.6557	1	1	2	3	5
380	76	2.3553	1	1	2	2	5
381	296	2.2804	1	1	1	3	5
382	87	1.7586	1	1	1	1	3
383	737	4.9403	1	2	3	6	9
384	118	3.3644	1	1	2	4	7
385	4	20.7500	1	1	9	10	53
386	1	10.0000	10	10	10	10	10
389	26	12.9231	2	3	5	23	27
390	29	7.0345	1	1	5	7	16
391	1	7.0000	7	7	7	7	7
392	2555	16.5202	6	8	12	21	52
393	3	36.6667	7	7	9	94	94
394	2345	10.5527	1	3	6	12	23
395	73662	6.5334	1	3	5	8	13
396	53	2.4340	1	1	2	3	5
397	10330	7.7293	2	3	6	9	15
398	12174	9.2018	3	4	7	11	18
399	2802	5.9461	1	2	4	7	11
400	7960	15.1925	4	6	11	18	32
401	6279	15.6785	3	6	11	20	33
402	3786	6.1017	1	2	4	8	13
403	24251	12.3952	2	5	9	16	26
404	7513	6.6728	1	3	5	8	14
406	3898	16.2696	4	7	12	21	32
407	1805	8.3773	2	4	7	10	15
408	10842	6.7635	1	2	4	7	15
409	8347	10.6691	2	4	6	14	23
410	135537	3.4776	1	2	3	4	6
411	502	3.6673	1	1	3	5	7
412	402	2.9950	1	1	2	3	7
413	10382	11.1452	2	4	8	14	24
414	3611	7.1916	1	2	5	9	15
415	24958	21.7488	5	9	15	26	43
416	106849	10.6223	2	5	8	13	20
417	39	6.7436	2	4	6	7	14

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
418	11455	8.6142	3	4	7	11	16
419	15741	7.7998	2	4	6	9	15
420	4782	5.9523	2	3	5	7	11
421	14409	5.6390	2	3	4	7	10
422	102	4.8137	2	2	4	6	9
423	6362	11.6015	3	5	8	14	23
424	3422	24.1642	3	8	15	27	49
425	15991	6.5508	2	3	4	8	13
426	9476	8.0496	2	3	6	10	17
427	2127	8.2261	2	3	6	10	17
428	1254	10.6164	1	3	7	13	22
429	30633	12.3370	3	4	7	13	22
430	61090	12.8490	3	5	9	16	26
431	409	9.0611	2	3	6	11	18
432	637	7.8838	1	2	4	9	19
433	5209	5.0035	1	2	3	6	12
434	16479	8.4696	2	3	6	10	18
435	13606	7.4311	2	3	5	8	18
436	4221	15.9123	3	7	15	25	29
437	9335	17.2863	4	9	17	26	30
439	1242	13.3398	1	3	7	15	33
440	7491	17.6641	3	6	11	22	40
441	1006	4.5974	1	1	2	5	9
442	42857	9.9555	1	2	6	12	22
443	14917	6.6517	1	2	4	9	14
444	3825	7.2214	2	3	5	9	14
445	2824	5.1831	1	2	4	6	9
446	1	1.0000	1	1	1	1	1
447	2842	3.5943	1	1	3	4	7
448	1	2.0000	2	2	2	2	2
449	32039	6.4346	1	3	5	8	12
450	11406	3.9479	1	1	3	5	8
451	10	3.0000	1	2	3	4	5
452	23110	6.9395	1	3	5	8	14
453	10313	4.3921	1	2	3	5	9
454	5031	7.2282	1	2	5	8	15
455	1799	4.1556	1	2	3	5	8
456	240	13.3250	1	2	6	14	37
457	137	6.3066	1	1	1	8	17
458	1914	23.8072	5	10	18	30	48
459	1017	15.4798	3	6	10	19	33
460	2339	9.4361	2	4	7	11	18
461	8307	5.2560	1	1	2	5	12
462	6358	18.8877	5	9	16	25	36
463	9606	7.1424	2	3	5	9	14
464	3750	4.5835	1	2	3	6	9
465	838	2.7757	1	1	2	3	5
466	5110	5.2176	1	1	2	5	11
467	5169	4.1068	1	1	2	4	8
468	70294	19.5170	3	8	14	24	38
471	5027	17.8705	9	11	15	21	29

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY88 MEDPAR UPDATE 06/89 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
472	247	34.3441	1	11	26	46	70
473	8320	16.6238	2	4	10	25	40
474	12333	49.0676	14	24	38	59	92
475	45295	14.3648	2	6	11	18	28
476	11120	18.4045	8	11	15	21	31
477	38806	10.9883	1	3	8	13	22

BILLING CODE 4120-03-C

TABLE 8.—STATEWIDE AVERAGE COST-TO-CHARGE RATIOS FOR URBAN AND RURAL HOSPITALS

[Case Weighted]

State	Urban	Rural
Alabama	0.5349	0.5803
Alaska	0.6668	0.8320
Arizona	0.6131	0.6490
Arkansas	0.6351	0.6208
California	0.6015	0.6056
Colorado	0.6228	0.6764
Connecticut	0.7298	0.7799
Delaware	0.6138	0.6293
District of Columbia	0.6270	.....
Florida	0.5561	0.5481
Georgia	0.6421	0.6108
Hawaii	0.6139	0.7264
Idaho	0.7301	0.7205
Illinois	0.6050	0.6755
Indiana	0.7320	0.7460
Iowa	0.6600	0.7469
Kansas	0.6394	0.7577
Kentucky	0.6328	0.6035
Louisiana	0.6025	0.6274
Maine	0.7177	0.7106
Maryland	0.7454	0.7058
Massachusetts	0.6880	0.7614
Michigan	0.6251	0.7068
Minnesota	0.7048	0.7402
Mississippi	0.6315	0.6478
Missouri	0.6011	0.6381
Montana	0.6917	0.6958
Nebraska	0.6298	0.7070
Nevada	0.5179	0.7496
New Hampshire	0.7290	0.7470
New Jersey	0.7300	.....
New Mexico	0.6274	0.6079
New York	0.6480	0.7621
North Carolina	0.6912	0.6228
North Dakota	0.7878	0.7042
Ohio	0.6767	0.6926
Oklahoma	0.6151	0.6423
Oregon	0.6701	0.7058
Pennsylvania	0.5631	0.6165
Puerto Rico	0.5388	0.6198
Rhode Island	0.7645	.....
South Carolina	0.6109	0.5823
South Dakota	0.6280	0.6918
Tennessee	0.5837	0.6004
Texas	0.5963	0.6957
Utah	0.7018	0.7029
Vermont	0.7690	0.7130
Virginia	0.6229	0.6194
Washington	0.7146	0.7391
West Virginia	0.6427	0.5973
Wisconsin	0.7864	0.7804
Wyoming	0.7473	0.7852

Appendix A—Regulatory Impact Analysis

I. Introduction

Executive Order (E.O.) 12291 requires us to prepare and publish a regulatory impact analysis for any final rule that meets one of the E.O. criteria for a "major rule"; that is, that will be likely to result in—

- An annual effect on the economy of $100 million or more;
- A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- Significant adverse effects 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 addition, we generally prepare a regulatory flexibility analysis that is consistent with the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 through 612), unless the Secretary certifies that a final rule will not have a significant economic impact on a substantial number of small entities. For purposes of the RFA, we consider all hospitals to be small entities.

Also, section 1102(b) of the Act requires the Secretary to prepare a regulatory impact analysis for any final rule that may have a significant impact on the operations of a substantial number of small rural hospitals. Such an analysis must conform to the provisions of section 604 of the RFA. With the exception of hospitals located in certain rural counties adjacent to urban areas, for purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital with fewer than 50 beds located outside of a Metropolitan Statistical Area or New England County Metropolitan Area, as modified, for purposes of the prospective payment system, by section 601(g) of the Social Security Amendments of 1983 (Pub. L. 98-21). Section 1886(d)(8)(B) of the Act specifies that hospitals located in certain rural counties adjacent to one or more urban areas are deemed to be located in the adjacent urban area. We have identified 52 rural hospitals, some of which may be considered small, that we are classifying as urban hospitals.

It is clear that the changes being implemented in this document will affect both a substantial number of small rural hospitals as well other classes of hospitals, and the effects on some will be significant. Therefore, the discussion below, in combination with the rest of this final rule, constitutes a combined regulatory impact analysis and regulatory flexibility analysis in accordance with E.O. 12291, the RFA, and section 1102(b) of the Act.

Since we have not significantly altered our final policy from the proposed, the impact of this final rule will be virtually identical to the impact presented in our initial analysis. The only differences in this final analysis from the initial impact analysis are to reflect the availability of more recent data since publication of the proposed rule, and the receipt of public comments directed specifically at the initial impact analysis. Thus, the following analysis revises those portions of the initial impact analysis that are affected by the availability of more recent and complete data and responds to the two comments that concerned the impact analysis.

II. Impact on Excluded Hospitals and Units

As of August 15, 1989, over 930 Medicare hospitals and nearly 1,700 units in hospitals included in the prospective payment system currently are paid on a reasonable cost basis subject to the rate-of-increase ceiling requirement of § 413.40. For cost reporting periods beginning in FY 1990, these hospitals will have their individual target amounts increased by the hospital market basket percentage increase. We are projecting an increase in the hospital market basket of 5.5 percent.

The effect this will have on affected hospitals and units will vary depending on each hospital's or unit's existing relationship of costs per discharge to its target amount, and the relative gains in productivity (efficiency) the hospital or unit is able to achieve. For hospitals and units that incur per discharge costs lower than their target amounts, the primary impact will be on the level of incentive payments made under § 413.40(d). A hospital may receive incentive payments for incurring costs that are lower than its target amount, but may not receive payments for costs that exceed the target amount. We expect the increased ceiling on payments would maintain existing incentives for economy and efficiency experienced by excluded hospitals and units.

III. Analysis of the Quantifiable Impact of Changes Affecting Rates and Payment Amounts

A. Basis and Methodology of Estimates

The data used in developing the following quantitative estimates of changes in payments presented in Table I, below, are taken from FY 1988 billing data and hospital-specific data for FY 1986 and FY 1987. Our initial impact analysis used FY 1988 MEDPAR data received through December 1988 (approximately 9.7 million discharges). This final analysis relies on FY 1988 MEDPAR data received through June 1989 (approximately 10 million discharges). Also, for purposes of the final impact analysis, we have excluded the 37 Indian Health Service hospitals that receive payments under the prospective payment system from our hospital data base. These hospitals receive their own wage index and are

subject to special payment policies not applicable to any other group of hospitals under the prospective payment system. Because payments to these hospitals are not representative of payments to other hospitals, including them in the impact analysis produces some distortions in our quantitative analysis. By removing them from the data base, we believe the resulting impact estimates will more accurately reflect the effect on the remainder of the prospective payment hospitals of the policy changes being implemented.

With the exception of these changes in our analytical methodology, we are conducting the same analysis in this final rule as we performed in the initial analysis. As in the initial analysis, we compare the effects of changes being implemented in this document for FY 1990 to our estimate of the payment amounts in effect for FY 1989. In addition, we have treated all hospitals in our data base as if they had the same cost reporting period; that is, a cost reporting period coinciding with the Federal fiscal year. Furthermore, our model does not take into account any prospective, behavioral changes in response to this final rule.

The tables and the discussion that follow reflect our best effort to identify and quantify the effects of the changes set forth in this document. It should be noted, however, that as a result of gaps in our data, we are unable to quantify some of the effects of the proposed rule. Also, we could not use all the hospitals in the recalibration of outlier data sets for modeling the impact analysis because in some cases the hospital-specific data necessary for constructing our impact model were missing. Data on hospital bed size and type of ownership were the data elements most frequently missing. The absent data prevented us from properly classifying and displaying these hospitals in the impact analysis. The missing data, however, did not prevent us from using the discharges from these hospitals in recalibrating the DRG weights or calculating the outlier payments that are included in the final column of Table I showing the combined effects of all changes.

The following analysis examines the changes being implemented to the DRG weights and wage index separately. That is, all variables except those associated with the provision under examination were held constant so as to display the effects of each provision compared to the baseline (FY 1989) provisions. In the last column (column 3), we present the combined effect of all changes being implemented in this rule. That is, column 3 displays the combined effects of the previous two columns as well as the FY 1990 update factor and the updating of the outlier payment thresholds. As such, this last column is the only one in which the effects of all the quantifiable payment policy changes on simulated FY 1990 payments are reflected.

Consistent with the display of the impact presented in Table I, the following discussion is divided into two parts. The first part (columns 1 and 2) describes the effects of two major changes in this document: the annual changes to the DRG classification system and recalibration of the DRG weights required under section 1886(d)(4)(C) of the Act (including the adjustment for increased case mix); and replacement of the current wage index based on an equal blend of 1982 and 1984 wage data with a wage index based on 1984 wage data. The final section discusses the combined effect of all provisions of this rule.

Comment: One commenter suggested that the impact analysis include the effect of regulatory changes on payment to hospitals with varying proportions of Medicare utilization.

Response: We agree with the commenter that such an analysis would be useful and we have incorporated Medicare utilization as a category in our impact tables.

Comment: A few commenters suggested refining the impact analysis to include not only the effect of regulatory actions on payments to various classes of hospitals, but also the effect on hospital operating margins.

Response: To date, our analytical efforts have been retrospective in nature; that is, they are concerned with examining the historical record in efforts to trace the impact of the prospective payment system through perceived changes in hospital behavior. Any efforts to predict providers' response to the changes in payment rules contained in this document would take the form of speculation rather than rigorous analytical prediction. Because of limited data, we are confined to making general statements based on reasoned judgment as to the impact of specific policy changes. Since we cannot predict how hospitals will change their behavior in response to these rules, we do not believe that we can reliably project future hospital profit margins based on the data available to us.

For example, we use FY 1988 billing data to estimate the impact of changes in FY 1990 payments. The latest cost data available for predicting FY 1990 profit margins are from FY 1987. Therefore, provider behavior changes in the recent past are not yet reflected in the data available to us, and future changes cannot be predicted. Moreover, our objective in an impact analysis is to access the probable direct consequences of changes being proposed or issued in final, not to evaluate the overall effects of the prospective payment system or to compare payments to expected costs.

In view of the problems we have experienced in quantifying impacts and attributing causality, we believe the approach we are taking in the impact analysis of measuring expected impacts on hospital payments is the most feasible one. We do not believe that we can reliably predict the impact of prospective payment system changes on future hospital profit margins. Therefore, we have focused our analysis on explaining the anticipated changes in hospital payment levels and the decisions that affected entities will have to consider.

TABLE I—IMPACT OF THE CHANGES BEING IMPLEMENTED IN THE PROSPECTIVE PAYMENT SYSTEM FOR FY 1990

	Number of hospitals [1]	Recalibration change [2] (1)	Wage index change [3] (2)	All changes [4] (3)
All Hospitals	5,557	−1.1	−0.1	3.7
Urban by Region	2,984	−1.0	−0.1	3.7
New England	182	−1.1	0.6	3.8
Middle Atlantic	381	−0.9	0.0	3.3
South Atlantic	444	−1.1	0.0	3.8
East North Central	540	−1.1	−0.7	3.1
East South Central	179	−1.0	−0.1	3.8
West North Central	200	−0.9	0.1	4.2
West South Central	374	−1.1	0.4	4.3

TABLE I—IMPACT OF THE CHANGES BEING IMPLEMENTED IN THE PROSPECTIVE PAYMENT SYSTEM FOR FY 1990—Continued

	Number of hospitals [1]	Recalibration change [2] (1)	Wage index change [3] (2)	All changes [4] (3)
Mountain	119	−1.0	−0.1	4.0
Pacific	515	−1.0	0.0	4.1
Puerto Rico	50	−1.5	−0.1	3.5
Rural by Region	2,573	−1.7	−0.1	3.5
New England	61	−1.5	0.4	4.0
Mid Atlantic	91	−1.5	−0.5	2.4
South Atlantic	343	−1.7	0.4	4.3
East North Central	332	−1.7	−0.1	3.67
East South Central	309	−1.8	0.2	3.3
West North Central	578	−2.0	−0.3	3.2
West South Central	343	−1.9	−0.6	3.5
Mountain	251	−1.8	0.0	3.9
Pacific	166	−1.6	−0.6	3.1
Puerto Rico	8	−2.1	−0.2	3.0
Large Urban Areas (populations over 1 million)	1,408	−1.0	−0.2	3.6
Other Urban Areas (populations with 1 million or fewer)	1,504	−1.1	0.1	3.9
Urban Hospitals	2,984	−1.0	−0.1	3.7
0 to 99 Beds	696	−1.7	−0.1	3.3
100 to 199 Beds	779	−1.4	−0.1	3.5
200 to 299 Beds	580	−1.2	−0.1	3.6
300 to 499 Beds	611	−1.0	0.0	3.8
400 plus Beds	271	−0.7	−0.1	3.8
Rural Hospitals	2,573	−1.7	−0.1	3.5
0 to 49 Beds	1,061	−2.2	−0.1	3.0
50 to 99 Beds	832	−1.9	−0.2	3.1
100 to 149 Beds	367	−1.8	−0.1	3.6
150 to 200 Beds	150	−1.7	−0.2	3.2
200 plus Beds	149	−1.4	−0.0	4.2
Teaching Status:				
Nonteaching	4,417	−1.5	−0.1	3.6
Resident/Bed Ratio Less Than 0.25	920	−1.0	−0.1	3.7
Resident/Bed Ratio 0.25 or Greater	218	−0.5	0.0	3.9
Disproportionate Share Hospitals (DSH):				
Non DSH	4,070	−1.3	−0.1	3.7
Urban DSH 100 Beds or More	1,069	−0.9	−0.1	3.7
Urban DSH Fewer Than 100 Beds	131	−1.4	−0.1	3.2
Rural DSH	287	−1.8	−0.3	2.8
Urban Teaching and DSH:				
Both Teaching and DSH	578	−0.7	−0.1	3.7
Teaching Only	478	−0.9	−0.1	3.8
DSH Only	622	−1.3	−0.1	3.6
Nonteaching and Non-DSH	1,306	−1.4	0.0	3.6
Other Special Status (Rural):				
Sole Community Hospital (SCHs)	308	−1.9	−0.1	3.4
Rural Referral Center (RRCs)	195	−1.5	0.1	5.2
Both SCH & RRC	23	−1.4	0.0	4.0
Type of Ownership:				
Voluntary	3,021	−1.1	−0.1	3.6
Proprietary	915	−1.3	0.1	3.8
Government	1,552	−1.2	0.0	3.7
Medicare Utilization as a Percent of Inpatient Days:				
0 to 25	396	−0.8	−0.1	3.7
25 to 50	2,923	−1.1	0.0	3.8
50 to 65	1,705	−1.3	−0.1	3.5
Over 65	403	−1.4	−0.3	3.5

[1] Because data necessary to classify some hospitals by category were missing, some hospitals were omitted from the analysis. Therefore, the total number of hospitals in each category may not equal the national total. Also, we have excluded Indian Health Service hospitals from our analysis because they are paid under special payment policies not applicable to any other hospitals under the prospective payment system.

[2] Recalibration of the DRG weights and classification changes are based on FY 1988 MEDPAR data and are performed annually in accordance with section 1886(d)(4)(C) of the Act. This column reflects the −1.22 percent adjustment in the DRG weights for the increase in the case-mix index attributable to DRG reclassification and recalibration. The −1.22 adjustment has a uniform impact on all hospitals.

[3] The wage index constructed entirely from 1984 hourly wage data was compared to the current wage index which is based on a blend of 1982 and 1984 data. The wage index also reflects changes required by section 1886(d)(8)(C) of the Act (which was added by section 8403(a) of Pub. L. 100-647). This provision requires the Secretary to compute a separate wage index value for an urban or rural area if the wage index value for that area was reduced as a result of deeming the hospitals in certain rural counties as urban in accordance with section 1886(d)(8)(B) of the Act.

[4] This column shows the combined effects of all the previous columns as well as the effects of updating the FY 1989 standardized payment amounts by the market basket increase as mandated by section 1886(b)(3)(B)(i) of the Act. Also, FY 1989 baseline payments reflect an estimate of outlier payments at 5.7 percent in contrast to the 5.1 percent set for the outlier pool. This estimate of payments from the outlier pool is exclusive of the approximately 1.0 percent additional outlier payments that result from the elimination of the day limitation on inpatient hospital services under Pub. L. 100-360. Because our total FY 1990 estimated payments do not perpetuate this 0.6 percent excess of outlier payments relative to the outlier pool, this column reflects the 0.6 percent reduction in total prospective payments necessary to ensure equality between projected outlier payments and the outlier offsets. In addition, this column captures certain interactive effects that we are not able to quantify.

B. Changes to the DRG Classification System and Recalibration of the DRG Weights, and Changes to the Wage Index

In Column 1, we present the combined effects of revising the current DRG definitions and recalibrating the weights to reflect changes in practice patterns, modes of treatment, and new technologies as required each year by section 1886(d)(4)(c) of the Act. These changes are described in section II.C. of the preamble to this rule. (The DRGs that have been recalibrated for this analysis also reflect, insofar as possible, the changes to the DRG classification system set forth in section II.B. of the preamble of this final rule.) As part of recalibrating and normalizing the DRG weights, we are adjusting all the DRG weights to correct for increases in the average case-mix index that have resulted from past GROUPER modifications. As explained in detail in section II.C. of the preamble to this final rule, we are reducing each DRG weight by 1.22 percent over what it would have been without this adjustment. Thus, in the following analysis, we compared estimated FY 1989 hospital payments using an estimate of each hospital's case-mix index based on the current DRG classifications and weighting factors to FY 1989 simulated payments using an estimate of each hospital's case-mix index based on the new DRG classifications and recalibrated weighting factors.

Nationally, revision to the DRG weights being implemented for FY 1990, with all other variables held constant, produce a 1.1 percent decrease in payments per case. However, within certain census divisions and among certain types of hospitals, DRG reclassification and recalibration appears to have a differential impact on hospital payments as a result of shifts in the relative weights among DRGs. In analyzing these shifts, we found that the DRGs with increased relative weights tended to be more expensive initially (higher weighted) than the DRGs with decreased relative weights. Since rural hospitals have a lower case mix, one result is that the average case weight for rural hospitals will decrease relative to the average case weights for urban hospitals. Consequently, reclassifiying and recalibrating DRGs will have a disproportionate impact on rural hospitals. The average reduction in payments to rural hospitals will be about 1.7 percent compared to an average reduction of about 1.0 percent for urban hospitals when we hold other payment variables constant. Holding all other payments variables constant, rural hospitals with fewer than 50 beds will experience a reduction in payments of 2.2 percent. Holding all other payment variables constant, sole community hospitals and other rural hospitals would experience payment reductions of about 1.4 percent.

The fact that DRG reclassification and recalibration has the greatest impact on small rural hospitals and sole community hospitals may explain the larger than average reductions for rural hospitals in the West North Central and West South Central census divisions. The majority of small hospitals and sole community hospitals are located in these areas.

Column 2 of Table II displays the estimated effects of changes to the wage index in this rule. As discussed in section III of the preamble, we are basing the wage index required under section 1886(d)(3)(E) and 1886(c)(9)(B)(vi) of the Act entirely on 1984 gross hourly wage data rather than on an equal blend of an index based on 1982 data and one based on 1984 data (as described in section III.B. of the preamble to this final rule). The wage index values also reflect changes required by section 1886(d)(8)(C) of the Act (which was added by section 8403(a) of the Technical and Miscellaneous Revenue Act of 1988 (Pub. L. 100-647)). This provision requires the Secretary to compute a separate wage index value for an urban or rural area if the wage index value for that area was reduced as a result of deeming hospitals in certain rural counties as urban in accordance with section 1886(d)(8)(B) of the Act (see section III.C. of the preamble to this final rule).

The changes to the wage index will have no significant effect on overall payments. The effect on hospitals in different geographic areas varies from an average 0.6 increase in payments for hospitals in the urban areas of the New England census division to a 0.7 reduction in payments for hospitals located in the urban localities of the East North Central census division. Generally, the new wage index changes will have the same effect on the overall distribution of payments to other urban and rural hospitals. The changes to the wage index will have slight effect on rural hospitals with fewer than 50 beds equal to the effect on all hospitals.

C. Combined Effects

Column 3 of Table I shows the FY 1990 rates that incorporate the combined effects of all the changes we are able to quantify. In addition to the changes described in columns 1 and 2, column 3 reflects the update factors mandated under section 1886(b)(3)(B)(i) of the Act.

Because Column 3 combines the FY 1990 payment rates and all other changes, the effects displayed also include the payment offset for outlier payments required under section 1886(d)(5)(A)(iv) of the Act. This provision requires that total outlier payments should not be less than five percent nor more than six percent of total prospective payments. In our analysis, similar to the analysis for FY 1989, we have set outlier thresholds and offset urban and rural rates for outliers so as to yield estimated outlier payments for FY 1990 equal to 5.1 percent of total DRG payments. In addition, sections 1886(d)(3)(B) and (d)(9)(b)(iv) of the Act requires that the urban and rural rates be offset by the same percentage of total payments that are outlier payments for urban and rural hospitals, respectively. Based on the most recent discharge data available, however, we anticipate that total outlier payments for FY 1989 (exclusive of the impact of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100-360)) will equal 5.7 percent of total prospective payments, instead of the 5.1 percent accounted for by the offsets to the current rates. Therefore, column 3 also reflects a reduction of 0.6 percent in payments compared to FY 1989 payments because the FY 1989 baseline payments are overstated by the 0.6 percent outlier payments in excess of the outlier offsets reflected in the FY 1989 standardized amounts. The 5.7 percent estimate of payments from the outlier pool is exclusive of the additional outlier payments that result from the elimination of the limitation on inpatient hospital services under section 101 of Pub. L. 100-360. Outlier payments resulting from the provisions of Pub. L. 100-360 are estimated at 1.0 percent of total DRG payments, resulting in an estimated 6.7 percent in total FY 1989 outlier payments. We estimate that the additional outlier payments resulting from the changes made by Pub. L. 100-360 will be 1.3 percent in FY 1990 and will result in FY 1990 outlier payments equal to 6.4 percent of total DRG payments.

Nationally, the effects of all changes we are making are expected to result in a 3.7 percent payment increase. Geographically, hospitals in rural areas of the South Atlantic census division and urban localities in the West South Central census division will receive the largest percentage increase in prospective payments of 4.3 percent. However, hospitals in rural areas of the Pacific census division and urban

hospitals in the East North Central census division could expect only a 3.1 percent increase over FY 1989 payments.

Generally, urban hospitals will receive a payment increase averaging 3.7 percent (the national average) while the average increase for all rural hospitals would be 3.5 percent. Among rural hospitals, it appears that hospitals with over 200 beds would receive an increase in payments of 4.2 percent while hospitals with fewer than 50 beds would receive an increase of about 3.0 percent.

Among the different types of hospitals, rural referral centers will receive the largest increase in payments (5.2 percent) while disproportionate share hospitals located in rural areas will receive the smallest payment increase (2.8 percent). Sole community hospitals will receive an increase of about 3.4 percent. Type of ownership does not appear to be a factor influencing payment increases. Hospitals grouped by type of control (voluntary, proprietary and government) would receive payment increases at or near the national average percentage increase. Hospitals that have high Medicare utilization (hospitals with more than 65 percent Medicare patient days) can expect an average payment increase of about 3.5 percent while hospitals with between 25 and 50 percent Medicare patients days can expect an average payment increase of about 3.8 percent.

We must point out that there are interactions that result from the combining of the various separate provisions analyzed in the previous columns that we are unable to isolate. Thus, the values appearing in column 3 do not represent merely the additive effects of the previous columns plus the update factors.

Table II presents the projected FY 1990 average payments per case for urban and rural hospitals and for the different categories of hospitals shown in Table I, and compares them to the average estimated per case payments for FY 1989. As such, this table presents the combined effects of the changes presented in Table I in terms of the average dollar amounts paid per discharge. That is, the percentage change in average payments from FY 1989 to FY 1990 equals the percentage changes shown in the last column of Table I.

TABLE II.—COMPARISON OF PAYMENT PER CASE

[FY 1990 Compared to FY 1989]

	Number of hospitals	Average FY 1989 payment per case (1)	Average FY 1990 payment per case (2)	Percentage Change [1] (3)
All Hospitals	5,557	4,598	4,767	3.7
Urban by Region	2,984	5,065	5,252,431	3.7
New England	182	5,065	5,231	3.8
Middle Atlantic	381	5,645	5,832	3.3
South Atlantic	444	4,632	4,807	3.8
East North Central	540	5,007	5,162	3.1
East South Central	179	4,306	4,469	3.8
West North Central	200	5,103	5,316	4.2
West South Central	374	4,640	4,839	4.3
Mountain	119	5,006	5,204	4.0
Pacific	515	5,789	6,026	4.1
Puerto Rico	50	2,039	2,111	3.5
Rural by Region	2,573	2,956	3,060	3.5
New England	61	3,568	3,712	4.0
Middle Atlantic	91	3,362	3,444	2.4
South Atlantic	343	2,999	3,128	4.3
East North Central	332	3,024	3,132	3.6
East South Central	309	2,605	2,690	3.3
West North Central	578	2,811	2,900	3.2
West South Central	434	2,727	2,822	3.5
Mountain	251	3,102	3,221	3.9
Pacific	166	3,667	3,780	3.1
Puerto Rico	8	1,543	1,589	3.0
Large Urban Areas (population over 1 million)	1,480	5,518	5,714	3.6
Other Urban Areas (populations with 1 million or fewer)	1,504	4,593	4,772	3.9
Urban Hospitals	2,984	5,065	5,252	3.7
0–99 Beds	696	3,864	3,992	3.3
100–199 Beds	779	4,318	4,467	3.5
200–299 Beds	580	4,716	4,888	3.6
300–499 Beds	611	5,143	5,337	3.8
400 + Beds	271	6,082	6,315	3.8
Rural Hospitals	2,573	2,956	3,060	3.5
0–49 Beds	1,061	2,510	2,585	3.0
50–99 Beds	832	2,684	2,768	3.1
100–149 Beds	367	2,902	3,008	3.6
150–200 Beds	150	3,161	3,263	3.2
200 + Beds	149	3,503	3,650	4.2
Teaching Status				
Nonteaching	4,417	3,836	3,973	3.6
Resident/Bed Ratio Less than 0.25	920	5,089	5,277	3.7
Resident Bed Ratio 0.25 or Greater	218	7,607	7,907	3.9
Disproportionate Share Hospitals (DSH)				
Non-DSH	4,070	4,169	4,322	3.7
Urban DSH 100 Beds or More	1,069	5,586	5,792	3.7
Urban DSH Fewer than 100 Beds	131	4,229	4,366	3.2
Rural DSH	287	2,833	2,913	2.8

TABLE II.—COMPARISON OF PAYMENT PER CASE—Continued

[FY 1990 Compared to FY 1989]

	Number of hospitals	Average FY 1989 payment per case (1)	Average FY 1990 payment per case (2)	Percentage Change [1] (3)
Urban Teaching and DSH				
Both teaching and DSH	578	6,163	6,393	3.7
Teaching Only	478	5,266	5,466	3.8
DSH Only	622	4,538	4,700	3.6
Nonteaching and Non-DSH	1,306	4,264	4,418	3.6
Other Special Status (Rural)				
Sole Community Hospital (SCHs)	308	2,948	3,049	3.4
Rural Referral Center (RRCs)	195	3,570	3,756	5.2
Both SCH & RRC	23	3,616	3,761	4.0
Type of Ownership				
Voluntary	3,021	4,773	4,946	3.6
Proprietary	915	4,106	4,264	3.8
Government	1,552	4,176	4,331	3.7
Medicare Utilization as a Percent of Inpatient Days				
0–25	396	6,086	6,310	3.7
25–30	2,923	4,803	4,983	3.8
50–65	1,705	4,060	4,201	3.5
Over 65	403	3,865	3,999	3.5

[1] Percentage changes shown in this column are taken from Table I, column 3. Because the dollar amounts shown in this table are rounded to the nearest dollar, percentage changes computed on the basis of these amounts will differ slightly from those displayed in this column.

Appendix B—Final Recommendation of Update Factors for Rates of Payment for Inpatient Hospital Services

Section 1886(e)(4) of the Act, as amended by section 4002(f) of Pub. L. 100–203, requires that the Secretary, taking into consideration the recommendations of ProPAC, recommend update factors for FY 1990 that take into account the amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality. Section 1886(e)(4) of the Act also applies to the target rate-of-increase limits for hospitals excluded from the prospective payment system.

As required by section 1886(e)(5) of the Act, we published the initial recommended FY 1990 update factors that are provided for under section 1886(e)(4) of the Act as Appendix C of the proposed rule (54 FR 19747). We recommended that the prospective payment rates be increased, on average, by an amount equal to the market basket percentage increase minus 1.5 percentage points. Based on the forecasted hospital market basket increase at the time the proposed rule was published, that is, 5.8 percent, the recommended update was 4.3 percent on average.

However, in making that recommendation, we stated that differential updates for hospitals in rural, large urban, and other urban areas would be more appropriate than a uniform update to the payment amounts. Therefore, we strongly recommended a higher update for hospitals located in rural areas. We also recommended that hospitals located in large urban areas receive a higher update than hospitals located in other urban areas. In addition, we recommended a higher update to the target rate-of-increase limits for hospitals excluded from the prospective payment system than the average update of the market basket increase minus 1.5 percentage points.

In recommending these increases, we took into account the requirement in section 1886(e)(4) of the Act that the amounts be high enough to ensure the efficient and effective delivery of medically appropriate and necessary care of high quality. In addition, as required by section 1886(e)(4) of the Act, we addressed ProPAC's Recommendations 1 through 7, which concern updating the standardized amounts and the rate-of-increase limits. Also, we requested public comment on our recommendation.

We note that although we recommended appropriate update factors, requested and received public comments on these recommendations, and are providing a final recommendation, Congress actually prescribed the update factors to be used in FY 1990 in section 1886(b)(3)(B)(i) of the Act, as amended by section 4002(a) of the Omnibus Budget Reconciliation Act of 1987 (Pub. L. 100–203). That is, as explained in the addendum to this final rule, the applicable percentage increase for FY 1990 for inpatient hospital services for hospitals subject to the prospective payment system is equal to the market basket rate of increase forecasted for FY 1990. The most recent forecasted hospital market basket increase for FY 1990 is 5.5 percent. Therefore, the applicable percentage increase for prospective payment hospitals is 5.5 percent.

For cost reporting periods beginning on or after October 1, 1989, and before October 1, 1990, section 1886(b)(3)(B)(ii) of the Act, as amended by section 4002(e) of Pub. L. 100–203, provides that the applicable percentage increase for hospitals and hospital units excluded from the prospective payment system equals the hospital market basket rate of increase. As noted above, the most recent forecasted market basket increase is 5.5 percent; therefore the increase in these hospitals and hospital units target rate is also 5.5 percent.

We received serveral items of correspondence during the public comment period concerning our initial recommendation. After consideration of all the arguments presented, we have decided that our final recommendation will be the same as our initial recommendation. That is, we recommend that, on average, all hospitals receive an update in their payments for FY 1990 equal to the market basket percentage increase minus 1.5 percentage points. Based on the most recent forecasted hospital market basket increase of 5.5 percent, our recommended update is 4.0 percent on average.

To date, our analyses indicate that, while hospitals nationally continued to have positive Medicare operating margins on average in the fourth year of

the prospective payment system, these levels have fallen from the high operating margins experienced in the first 2 years of that system. For this reason, we believe a prospective payment system update somewhat higher than the updates in past years is generally appropriate in order to ensure the availability of high quality care to Medicare beneficiaries. However, we believe that an average update factor lower than the market basket rate of increase is needed to continue to encourage hospitals to better control their costs.

Although we are recommending an update that averages the market basket percentage increase minus 1.5 percentage points for all prospective payment system hospitals, we recommend differentiation of the update according to the geographic classification of the hospital. We strongly recommend a higher update for hospitals located in rural areas. We also recommend that hospitals located in large urban areas (that is, those with a population exceeding 1,000,000) receive a higher update than hospitals located in other urban areas.

We are recommending differential updates based on geographic classification of hospitals as a result of our research on hospitals Medicare operating margins and our analysis of the impact the FY 1990 rates (based on a uniform update) will have on hospitals. While overall margins in FY 1987, the latest period for which we have complete data, were 5.3 percent, we found a disparity between urban and rural margins. Urban hospitals had FY 1987 inpatient Medicare operating margins of 6.3 percent. Rural hospital operating margins were −0.2 percent. Further, rural hospitals under 50 beds, which constitute 40 percent of rural hospitals, experienced, on average, operating margins of −2.9 percent. Because of our concerns with respect to the financial viability of rural hospitals, we believe that a higher update is appropriate. For hospitals in large urban areas, our data suggest that inpatient operating margins are declining as compared to the operating margins of hospitals in other urban areas, although such margins remain positive. For FY 1987, our data indicate that hospitals in large urban areas experienced margins of 5.8 percent as compared to 6.8 percent for hospitals in other urban areas. In view of the differences between costs per case and payments per case and the lower average Medicare operating margins in large urban areas, we believe that hospitals in large urban areas should receive a higher update than hospitals in other urban areas.

The FY 1990 rates are based on a uniform update equal to the percentage increase in the market basket, currently estimated at 5.5 percent. However, because of changes to the DRG weights and the wage index, as well as a reduction in outlier payments over current estimated FY 1989 levels, the FY 1990 rates will have a differential impact on hospitals according to geographic location. The net effect of all changes would be to increase payments to rural hospitals by 3.5 percent, to large urban hospitals by 3.6 percent, and to other urban hospitals by 3.9 percent. The net effect of all changes in this final rule, including the current law update, is a differential impact that is the opposite of the impact that would be appropriate based on the analysis of Medicare operating margins. Implementation of a higher update for rural hosptials and for large urban hosptials would reverse this effect.

Comment: Some commenters expressed concern that the update factor recommended by the Secretary did not include a discussion or presentation of the data used to form the basis of our recommendation and that the Secretary's recommendation was driven purely by budgetary requirements.

Response: While we have recommended an update to the prospective payment rates that is consistent with the Administration's budget proposal, our recommendation has analytic support. As in the past, we view the factors to be considered by the Secretary as a combination of hospital inputs, outputs, and outcomes.

The technical factors associated with the input and output portions of the update that we have considered include such items as the input costs faced by hospitals (that is, the hosptial market basket), hospital productivity, advances in science and technology, and changes in the nature of the practice patterns in hosptials. The productivity measure represents a future-oriented standard that incorporates expected savings based on established productivity goals. At the beginning of the prospective payment system update process, HCFA established a conservative standard for hospital productivity increase of 1.0 percent per year and, therefore, used a −1.0 percent adjustment for productivity increases. In the short run, any increases in productivity in excess of 1.0 percent would be kept by hospitals as increases in the operating margin. Increases in productivity of less than 1.0 percent would be discouraged by this standard as it affects hospital payment rates. Hospitals have made substantial increases in productivity since the implementation of the prospective payment system, and we believe that productivity gains can and should continue.

With respect to technological advances, we have relied on the results of several studies. ProPAC's study on the operating costs of new science and technology indicated that most new technologies are substitutes for old technologies and in many cases are less expensive. Other studies have shown the cost of the top 100 technologies to be relatively small in the absolute. While it appears that new devices and diagnostic procedures tend to have only a small impact on overall hospital costs, we believe it is appropriate to encourage hospitals to use health-enhancing new technologies and that a small adjustment for new technologies is appropriate.

We continue to measure for practice pattern changes based on changes in average length of stay since the beginning of the prospective payment system. We note that this represents a crude measure that does not capture all changes in practice patterns that have occurred. Average length of stay declined dramatically during the first years of the prospective payment system, but has gradually increased in the last few years. However, we believe an adjustment of as much as −0.84 percent for cumulative changes in practice patterns would be appropriate.

We have not developed an adjustment for case-mix changes as part of our recommended update because of the inherent difficulties in measuring real case-mix changes versus coding improvements. While average case mix continues to increase, we recognize that much of the upcoding noted in earlier years has leveled off. However, we agree with ProPAC's assessment that not all of the case-mix increase is attributable to increases in case complexity and that some coding improvements continue to be reflected in the observed case-mix increase.

Of the various factors that are considered in the update recommendation, outcomes are particularly difficult to analyze. For this reason, HCFA has recommended close monitoring of indicators such as the level of preventable deaths, premature discharge, and substandard regimens of care. The Secretary and the Congress have had to make subjective judgment on how these factors affect the final update amount.

Taking all these factors into account, we believe our recommended average update amount for FY 1990 of market basket percentage increase minus 1.5 percent is appropriate and that an average update factor lower than the market basket rate of increase is needed to continue to encourage hospitals to better control their costs.

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Part III

Environmental Protection Agency

40 CFR Part 261
Mining Waste Exclusion; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SWH-FRL-3625-8; EPA/OSW-FR-89-017]

RIN 2050 AC41

Mining Waste Exclusion

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: Section 3001(b)(3)(A)(ii) of the Resource Conservation and Recovery Act (RCRA) excludes "solid waste from the extraction, beneficiation, and processing of ores and minerals" from regulation as hazardous waste under subtitle C of RCRA, pending completion of certain studies by EPA. In 1980, EPA interpreted this exclusion (on a temporary basis) to encompass "solid waste from the exploration, mining, milling, smelting, and refining of ores and minerals" (45 FR 76619, November 19, 1980).

Today's final rule responds to a federal Appeals Court directive to narrow this exclusion as it applies to mineral processing wastes. EPA published a proposed rule articulating the criteria by which mineral processing wastes would be evaluated for continued exclusion on October 20, 1988 (53 FR 41288) and a revised proposal on April 17, 1989 (54 FR 15316). In today's final rule, EPA provides final criteria that have been modified in response to public comment, and finalizes the Bevill status of nine mineral processing waste streams that were proposed for either retention within or removal from the exclusion in the April notice. In addition, the Agency has modified the list of mineral processing wastes proposed for conditional retention in April, based upon the revised criteria and information submitted in public comment. All other mineral processing wastes that have not been listed for conditional retention will be permanently removed from the Bevill exclusion as of the effective date of this rule.

The Agency will apply the criteria described in this rule to the conditionally retained wastes and on that basis propose either to remove them from or retain them in the Bevill exclusion by September 15, 1989. Final Agency action on the scope of the Bevill exclusion for mineral processing wastes will occur by January 15, 1990.

DATES: *Effective Date:* March 1, 1990.

Not later than November 30, 1989, all persons who generate, transport, treat, store, or dispose of wastes removed from temporary exclusion by this rule and which are characteristically hazardous under 40 CFR part 261, subpart C, will be required to notify either EPA or an authorized State of these activities pursuant to section 3010 of RCRA.

See sections VI and VII of the preamble below for additional dates and details.

FOR FURTHER INFORMATION CONTACT: RCRA/Superfund Hotline at (800) 424-9346 or (202) 382-3000 or for technical information contact Dan Derkics, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, (202) 382-3608.

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I. Introduction

A. History

Section 3001(b)(3)(A)(ii) of the Resource Conservation and Recovery

Act (RCRA) excludes "solid waste from the extraction, beneficiation and processing of ores and minerals" from regulation as hazardous waste under subtitle C of RCRA, pending completion of certain studies by EPA. In 1980, the Agency interpreted this exclusion (on a temporary basis) to encompass all "solid waste from the exploration, mining, milling, smelting, and refining of ores and minerals" (45 FR 76619, November 19, 1980). In July, 1988, a federal Court of Appeals (*Environmental Defense Fund* v. *EPA*, 852 F.2d 1316 (D.C. Cir. 1988), *cert. denied*, 109 S. Ct. 1120 (1989) ("EDF II")) found that this exclusion is based upon the "special waste" concept first proposed by EPA in 1978 (43 FR 58946) and that

> Congress intended the term "processing" in the Bevill Amendment to include only those wastes from processing ores or minerals that meet the "special waste" concept, that is "high volume, low hazard" wastes. 852 F.2d at 1328–29.

In compliance with this Court decision, on October 20, 1988 EPA published a proposal to further define the scope of section 3001(b)(3)(A)(ii) of RCRA. (See 53 FR 41288) In the October 20, 1988 proposal, EPA presented a criterion for defining mineral processing wastes and a two-part criterion for identifying which mineral processing wastes are high volume; however, the Agency proposed to defer judgment on the hazard posed by high volume mineral processing wastes until preparation of a required Report to Congress. The Agency also applied the processing and volume criteria to its available data on mineral processing wastes, and identified 15 wastes which it believed met the criteria, and which the Agency therefore proposed to retain within the exclusion and study for the report to Congress:

1. Slag from primary copper smelting
2. Process wastewater from primary copper smelting/refining
3. Blowdown from acid plants at primary copper smelters
4. Bleed electrolyte from primary copper refining
5. Slag from primary lead smelting
6. Blowdown from acid plants at primary zinc smelters
7. Process wastewater from primary zinc smelting/refining
8. Red and brown muds from bauxite refining
9. Phosphogypsum from phosphoric acid production
10. Slag from elemental phosphorus production
11. Iron blast furnace slag
12. Air pollution control dust/sludge from iron blast furnaces
13. Waste acids from titanium dioxide production
14. Air pollution control dust from lime kilns
15. Slag from roasting/leaching of chromite ore

Based on comments received on the October 20, 1988 NPRM and further analysis, EPA decided that significant changes in the proposal were necessary before a final rule establishing the boundaries of the Bevill exclusion for mineral processing wastes could be promulgated. Accordingly, on April 17, 1989, the Agency published a revised proposed rule that contained a modified high volume criterion, clarifications to the definition of mineral processing, and for the first time, an explicit low hazard criterion. As stated in the April notice, EPA believes that such a criterion is required in order to identify those mineral processing wastes that are clearly not low hazard and, therefore, not "special wastes" even if they are high volume.

In the April NPRM, the Agency also proposed to remove from the Bevill exclusion all but 39 mineral processing wastes, many of which were "nominated" in public comment on the October NPRM. Of these 39, six wastes were believed at that time to satisfy all of the "special waste" criteria described in the proposal:

1. Slag from primary copper smelting
2. Slag from primary lead smelting
3. Red and brown muds from bauxite refining
4. Phosphogypsum from phosphoric acid production
5. Slag from elemental phosphorus production
6. Furnace scrubber blowdown from elemental phosphorus production

The other 33 wastes were proposed to be conditionally retained within the exclusion, because they are mineral processing wastes that the Agency believed satisfied the volume criterion articulated in the proposal but for which the Agency did not have adequate data to evaluate compliance with the proposal's new hazard criterion. Thus, the following 33 wastes were judged, based in many cases upon information submitted in public comment, to have generation rates that might exceed 50,000 metric tons per year per facility, and therefore, be potentially eligible for continued exclusion under Bevill:

1. Barren filtrate from primary beryllium processing
2. Raffinate from primary beryllium processing
3. Bertrandite thickener sludge from primary beryllium processing
4. Process wastewater from primary cerium processing
5. Ammonium nitrate process solution from primary lanthanide processing
6. Roast/leach ore residue from primary chrome ore processing
7. Gasifier ash from coal gasification
8. Cooling tower blowdown from coal gasification
9. Process wastewater from coal gasification
10. Bleed electrolyte from primary copper refining
11. Process wastewater from primary copper smelting/refining
12. Slag tailings from primary copper smelting
13. Calcium sulfate wastewater treatment plant sludge from primary copper smelting/refining
14. Furnace off-gas solids from elemental phosphorus production
15. Process wastewater from elemental phosphorus production
16. Fluorogypsum from hydrofluoric acid production
17. Air pollution control dust/sludge from iron blast furnaces
18. Iron blast furnace slag
19. Process wastewater from primary lead smelting/refining
20. Air pollution control scrubber wastewater from light weight aggregate production
21. Wastewater treatment sludge/solids from light weight aggregate production
22. Process wastewater from primary magnesium processing by the anhydrous process
23. Process wastewater from primary selenium processing
24. Process wastewater from phosphoric acid production
25. Wastes from trona ore processing
26. Basic oxygen furnace slag from carbon steel production
27. Leach liquor from primary titanium processing
28. Sulfate processing waste acids from titanium dioxide production
29. Sulfate processing waste solids from titanium dioxide production
30. Chloride processing waste acids from titanium and titanium dioxide production
31. Chloride processing waste solids from titanium and titanium dioxide production
32. Blowdown from acid plants at primary zinc smelters
33. Process wastewater from primary zinc smelting/refining

All other waste streams from mineral processing were proposed to be removed from the exclusion. Most of the remaining streams would be low volume; three high volume wastes were proposed for removal on the basis of

hazard: Acid plant/scrubber blowdown from the primary copper, lead, and tin sectors.

Finally, the April notice responded to a number of ancillary issues raised in public comment on the October 20, 1988 NPRM. The preamble to the notice presented a summary of these comments and preliminary Agency responses to the questions and issues raised therein. Responses to additional comments received on issues addressed in the April NPRM may be found in section II below or in the Supplemental Response to Comments, which may be found in the docket supporting today's rule.

A complete chronology of the special wastes concept, the Bevill Amendment, and EPA's activities to implement the Bevill Amendment is also presented in the "background" section of the preamble to the April NPRM (53 FR 15318–22).

B. Overview of Today's Rule

Today's rule establishes the final criteria that will be used to define Bevill-excluded mineral processing wastes. This final rule completes the first stage of rulemaking regarding the Bevill status of mineral processing wastes. In evaluating the components of this rule, the Agency has considered information presented in public comment on the October 1988 and April 1989 proposals, and accordingly, has modified the criteria, where appropriate.

These criteria consist of a revised and clarified definition of mineral processing, a modified volume criterion that consists of separate volume cut-offs for solid/sludge and liquid waste streams, and a refined low hazard criterion. Each will be discussed briefly in turn. More detailed descriptions are presented in section III of this preamble.

The definition of mineral processing has been modified so as to include fewer types of unit operations. In most instances, operations that are no longer considered "processing" have been redesignated "beneficiation" operations. The primary reason for making this change is to achieve consistency with previously articulated EPA definitions of "beneficiation". Today's definition provides resolution of potential conflicts regarding the regulatory status of mining wastes that have already been studied and subjected to a Regulatory Determination; the definitions provided in the proposed rules might have suggested another study and determination for materials that have already been addressed by the Agency. EPA did not intend such a result and believes that the definition of "beneficiation" in its 1985 Report to Congress is the most consistent with the standard use of the term.

The high volume criterion has been bifurcated in response to public comment on the April notice. EPA has determined empirically that amenability to subtitle C management controls (the basis for the high volume criterion) varies markedly between liquid and non-liquid waste streams. Examination of data obtained from a recent EPA nationwide census of subtitle C treatment, storage, disposal and recycling facilities reveals that many industrial facilities successfully manage substantially more than 50,000 metric tons per year of a single hazardous wastewater stream. Non-liquid waste streams, in contrast, are managed in quantities greater than 50,000 metric tons per year in only a few instances. Accordingly, the Agency has in today's rule established final volumetric cut-offs of 45,000 metric tons per year per facility for non-liquid wastes and 1,000,000 metric tons per year per facility for liquid wastes. The rationale for these new values is presented in section III, below.

The low hazard criterion described in the April NPRM has been modified to account for resolution of a number of issues raised in public comment. While the Agency has retained its basic approach, it has modified the application of the low hazard criterion to specific waste streams in order to account for additional waste constituent data that have been submitted by facility operators or collected from other sources. The final low hazard criterion is applied by evaluating the data collected by EPA and analyzed using Method 1312 (Synthetic Precipitation Leaching Procedure). If samples of a waste stream from two or more facilities fail the test, then the waste is withdrawn from the Bevill exclusion, unless a preponderance of evidence indicates that the test results are anomalous. The conditions under which EPA will assemble and consider this evidence are discussed in section III of this preamble.

As stated in both the October 1988 and April 1989 proposals, individual waste streams must meet all Bevill special mineral processing waste criteria to be eligible for continued regulatory exclusion and study in the Report to Congress. In many cases, individual mineral processing wastes will not meet these criteria and hence, will be permanently removed from the Bevill exclusion as of the effective date of this rule.

In a limited number of cases, EPA does not currently have sufficient information to evaluate whether specific waste streams conform to the low hazard criterion. As discussed below, the status of these materials will be addressed in a subsequent rulemaking. At that time, the Agency will also reevaluate whether these wastes conform to the final volume criterion using data collected during EPA's recent National Survey of Solid Wastes from Mineral Processing Facilities.

C. Future Activities

This rule establishes the final criteria that will be employed to make individual Bevill mineral processing waste exclusion decisions. Preliminary decisions on the status of conditionally excluded high volume wastes will be articulated in a proposed rule to be signed on or before September 15, 1989. These decisions will be based upon information collected by or submitted to the Agency during recent months.

Final action on proposed wastes will be taken by January 15, 1990. At this time, the final boundaries of the Mining Waste Exclusion for mineral processing wastes will be established.

All mineral processing wastes retained within the final Bevill mineral processing waste exclusion will be subjected to detailed study by EPA. The findings of these studies will be contained in a Report to Congress that will be submitted by July 31, 1990.

Six months after submission of this report, the Agency will publish a Regulatory Determination stating that the studied materials will either be regulated under subtitle C of RCRA as hazardous wastes, or that such regulation is unwarranted.

II. Analysis of and Response to Public Comments on 10/20/88 and 4/17/89 Proposed Rules

A. EPA's General Approach

1. EPA's Response to Statutory and Judicial Directives

In promulgating today's final rule, EPA is responding to a Federal Court of Appeals order to narrow the scope of the Bevill exclusion for mineral processing wastes to a group of "special wastes," i.e., those mineral processing wastes with the unique characteristics of high volume and low hazard. To carry out these directives, EPA is today finalizing the criterion for defining mineral processing wastes and the criteria for determining whether these wastes fall under the exclusion for "special wastes." Furthermore, EPA is today applying these criteria to many of the mineral processing wastes and, therefore, is removing most of them from the Bevill exclusion. Today's rule also

constitutes final Agency action on a select group of high volume mineral processing wastes. The Bevill status of additional high volume mineral processing wastes (i.e., those that are "conditionally" exempt) will be proposed in September of this year. Some of these conditionally exempt wastes will remain within the exclusion for the purposes of further study, others will be removed because further information shows that they do not meet all of the "special wastes" criteria. Under statutory directive, the final regulatory determination for wastes that remain temporarily excluded will be made six months after completion of a Report to Congress. This is the same basic approach EPA used in its October, 1988 (53 FR 41288) and April, 1989 (54 FR 15316) proposals for narrowing the scope of the Bevill exclusion.

EPA received numerous comments questioning the approach of the October and April proposals in narrowing the Bevill exclusion. Several commenters continued to dispute the validity of using the "special waste" concept in interpreting the intent of the Bevill Amendment. In addition, some commenters asserted that EPA had proposed to interpret the Bevill Amendment too narrowly, and that in general terms wastes from the extraction, beneficiation, and processing of ores and minerals should be excluded from subtitle C regulation until comprehensive studies of these wastes can be completed. In contrast, some other commenters stated that the proposed interpretation of the Bevill exclusion was too broad, and that the exclusion should be limited to even fewer "special wastes."

EPA has carefully considered these comments as they apply to the final rule. The Agency maintains its position that the special waste concept is central to understanding Congressional intent underlying the Bevill Amendment, and that EPA must limit the scope of the Bevill exclusion to include only those wastes that meet the "special waste" criteria presented in the rule. EPA encountered no compelling arguments in public comments on the two proposals which would cause it to alter this interpretation of the legislative history; this history is described in detail in the April NPRM.

EPA's position on this matter is supported and in fact mandated by the 1988 Federal Court of Appeals decision that required a narrowing of the scope of the Bevill exclusion for mineral processing wastes. The Court determined that the Bevill Amendment was intended to apply only to mineral processing wastes that meet the "special waste" criteria, i.e., high volume, low hazard wastes. The Court ordered EPA to propose and finalize regulations that narrow the Bevill exclusion to encompass only "special wastes;" today's final rule is the latest in a multistep process to meet the requirements of the Court order.

Despite commenter assertions to the contrary, EPA is not required to complete a comprehensive study of all mineral processing waste streams prior to articulating the specific wastes remaining excluded under the Bevill Amendment. The Court of Appeals ruling stipulates that the required study (Report to Congress) is only applicable to mineral processing wastes that fall within the statutory exclusion; the study is intended to result in a final regulatory determination for those wastes (i.e., whether any of the Bevill wastes should be regulated under subtitle C).

EPA notes that there is a lack of detailed statutory, legislative, regulatory, and judicial history and guidance available to assist EPA in defining, ten years after it was originally proposed, the specific contours of the "special waste" concept, particularly as it applies to mineral processing wastes. EPA's 1978 proposal and the 1979 draft background document do not attempt to define the term "processing of ores and minerals" nor attempt to quantify the concepts of "high volume" and "low hazard." The legislative history of the Bevill amendment in 1980 fails to give content to these concepts as well. And while the U.S. Court of Appeals in EDF II, declares that six hazardous smelter wastes are not "special wastes," it specifically leaves to EPA the responsibility of defining which other mineral processing wastes are special wastes.

As a result, EPA has the discretion and responsibility to develop and apply criteria that define the scope of the Bevill exclusion within the broad limits of this ten years of history. EPA today adopts the approach proposed in October and April, that is, to quantify the terms "high volume" and "low hazard" and apply them to wastes from operations that meet a definition of "mineral processing" developed by EPA to reflect past regulatory history and EPA's professional judgment regarding the mineral processing industry.

EPA believes that using specific quantitative criteria for the volume and hazard tests best allows EPA to fairly characterize which wastes from mineral processing should remain within the Bevill exclusion. EPA agrees that it could have adopted a functional approach to defining "special wastes" from mineral processing, or could have set slightly different quantitative cutoffs based on slightly different assumptions regarding both the volume and hazard issues. However, the volume and hazard criteria adopted today are only used as a preliminary screen to define which wastes deserve closer study. And those wastes which do not pass today's criteria are not automatically subjected to subtitle C regulation; they must also exhibit one or more of the hazardous characteristics adopted by EPA in 1980 after extensive consideration and public participation.

EPA does not believe that the specific criteria chosen today are unreasonable, particularly in light of the very limited time given EPA to complete this final rule. Indeed, as EPA shows below, slight changes in the volume and hazard criteria adopted today would not appreciably affect the list of excluded wastes. EPA believes that it has resolved specific issues related to the criteria in a reasonable manner consistent with the general approach for defining "special wastes" outlined above.

2. Status of Future Waste Streams

In both the October 20, 1988 and April 17, 1989 proposals, EPA stated that the current series of rulemakings would conclude the Agency's response to statutory and judicial directives to define the scope of the Bevill exclusion for mineral processing wastes. In other words, EPA proposed to make a one-time determination of Bevill status. Wastes not yet in existence and wastes not meeting the high volume/low hazard criteria during any of the past five years would therefore not be eligible for Bevill exclusion status in the future.

Some commenters addressing this provision reiterated their disagreement with the one-time reinterpretation approach. They maintained that the Bevill Amendment does not place time limits on the exclusion of wastes, thus the one-time reinterpretation violates Congressional intent. They also maintained that a one-time reinterpretation would decrease environmental protection in the long run by creating a disincentive for industry to employ new manufacturing or waste treatment operations that may unfairly fall under costly subtitle C regulation.

Moreover, given the changing nature of the mining industry, some commenters contended that EPA must consider that new processing waste streams will arise, and that lesser volume streams that vary in quantity may satisfy the criterion in the future.

Commenters pointed to roast leach acid plant residue from primary copper processing, oil shale and tar sand processing wastes, and wastes from the processing of nodules collected from the ocean as examples of wastes that may qualify for the Bevill exclusion in the near future under the proposed criteria.

These commenters also asserted that EPA should study and issue regulatory determinations for wastes that may meet the special waste criteria in the future. They also argued that it is more appropriate to define the scope of the Bevill exclusion for mineral processing wastes directly using the criteria and not create a list of wastes that EPA has determined meet the criteria. Applying the criteria to additional waste streams in the future would allow for the effects of changing market conditions and new mineral processing technologies. Some commenters thus recommended that EPA amend the proposed rule to include a provision whereby if a waste qualifies as a high volume/low hazard waste in the future, it would become subject to the provisions of the Bevill Amendment.

The Agency has considered these comments and decided to maintain its proposed approach of a one-time reinterpretation of the Bevill exclusion for mineral processing wastes. As discussed in the April proposal, EPA interprets the legislative history as clearly establishing a temporary exclusion through the Bevill Amendment over a fixed time period. In fact, the statutory language includes explicit time limits on the Bevill exclusion which apply to the submission of the required Report to Congress and subsequent regulatory determination. Moreover, the Court of Appeals decision stipulates an updated timetable for completion of the study and the final regulatory determination.

In today's final rule, wastes not presently being generated or currently meeting the high volume/low hazard standard will not be considered for special waste status in the future. Thus, EPA is making a one-time reinterpretation of the Bevill exclusion for mineral processing wastes by providing a specific list of such wastes that tentatively fall under the "special waste" criteria. EPA further maintains that the one-time reinterpretation is not contrary to the interests of industry or the environment. New wastes generated in the future will be regulated under either the subtitle C or subtitle D regulatory programs, thus industry will know in advance the regulatory standards that will be applied to new mineral processing wastes. EPA does not believe that failure to apply the Bevill Amendment to future waste streams will discourage treatment of these wastes; the application of Subtitle C or D will, in many cases, create exactly the opposite incentive. Thus, this position is consistent with recent EPA policy initiatives that encourage the development of process changes and new waste treatment technologies that minimize hazardous waste/treatment residual generation.

Certain commenters took issue with EPA's assertion that the Report to Congress on Bevill wastes identified in today's rule would be the last under section 8002(p). They argued that EPA is under a continuing statutory duty to study and Report to Congress under sections 8002(f) and 8002(p) of RCRA regarding wastes from the extraction and beneficiation of ores and minerals in sectors not discussed in detail in EPA's 1985 report entitled "Wastes from the Extraction and Beneficiation of Metallic Ores, Phosphate Rock, Asbestos, Overburden from Uranium Mining, and Oil Shale" (Dec. 31, 1985). These commenters cited pages from a draft EPA report (which was never completed or released to the public) on wastes from certain mineral processing operations. In that draft report, the commenters allege, EPA committed to further study of wastes from the extraction and beneficiation of certain nonmetallic ores and minerals.

EPA disagrees that it is necessary for the Agency to commit to further studies of extraction and beneficiation wastes under section 8002(p). EPA believes that the 1985 Report, and the subsequent regulatory determination, discharged its statutory duty with respect to all extraction and beneficiation wastes. As explained in the Executive Summary to the 1985 Report, the Report specifically addressed "wastes from the extraction and beneficiation of metallic ores (with special emphasis on copper, gold, iron, lead, silver and zinc), uranium overburden, and the nonmetals asbestos and phosphate rock." Oil shale wastes were also addressed in an Appendix. EPA explained that it "selected these mining industry segments because they generate large quantities of wastes that are potentially hazardous and because the Agency is solely responsible for regulating the waste from extraction and beneficiation of these ores and minerals." Report to Congress, page ES-2. However, the Report is not limited solely to wastes from these identified sectors. Rather, the Report considers waste generation, waste management, health and environmental risks, and regulatory impacts on the entire nonfuel mining and beneficiation industry. *See, e.g.*, Report, pages ES-3, ES-4 (overview of the nonfuel mining industry), ES-10 (potential dangers posed by the nonfuel mining industry), and ES-14 (potential costs of regulating mining wastes as hazardous).

EPA's 1986 Regulatory Determination also clearly states that it covers all mineral extraction and beneficiation wastes. As EPA said at the time, "this notice constitutes the Agency's regulatory determination for the wastes covered by the Report to Congress, i.e., wastes from the extraction and beneficiation of ores and minerals." 51 FR 24497 (July 3, 1986). The Regulatory Determination went on to explain that, by contrast, Bevill mineral processing wastes (based on EPA's 1985 proposal) "were not studied in the mining waste Report to Congress and therefore, are not covered by this regulatory determination." *Ibid.*

EPA believes that the Report to Congress and Regulatory Determination make clear the Agency's intent that wastes from the extraction and beneficiation of ores and minerals are to be regulated under subtitle D. Accordingly, EPA has no present plans to conduct any further studies under 8002(p) or make any further regulatory determinations. EPA's draft Report to Congress cited by the commenters was an internal pre-decisional document and does not represent the final Agency policy on this issue. (EPA also has no plans to complete or submit that Report in any form; its relevance was rendered moot by the decision in EDF II.)

3. Retroactive Application of Subtitle C Requirements

In the April NPRM, EPA stated explicitly that subtitle C regulation arising from the withdrawal of Bevill status from most mineral processing wastes would not be imposed retroactively. That is, Subtitle C requirements would apply only to newly generated or actively managed mineral processing wastes that are removed from the Bevill exclusion and that exhibit one or more characteristics of hazardous waste, not to existing accumulations of these materials unless they are actively managed after the effective date of the rule or are subject to regulation as waste mixtures, as discussed in further detail below. This is consistent with standard Agency policy regarding the imposition of new regulatory requirements.

Commenters disagreed on the appropriateness of this approach. One commenter supported the approach, while another stated that the lack of regulation of previously disposed

mineral processing wastes would not be protective of human health and the environment. Most comments on the retroactivity provision, however, centered around the definition of "active management." Several commenters requested clarification of this term.

In keeping with the April proposed rule, today's final rule does not impose Subtitle C requirements (such as those for closure and post-closure care) on mineral processing wastes that were disposed prior to the effective date of today's rule, unless they are actively managed after the effective date. This provision ensures that those mineral processing wastes that were originally excluded from subtitle C under the Bevill exclusion, and are now considered hazardous under the reinterpretation of the Bevill exclusion, are not subject to subtitle C requirements if the wastes were disposed prior to the effective date of the final rule. EPA is maintaining its proposed approach largely because of its long-standing policy of not regulating wastes under RCRA that were disposed prior to the effective date of a rule governing those wastes. See, e.g., 45 FR 33066.

For purposes of this rule, EPA views active management as physically disturbing the accumulated wastes within or disposing additional non-Bevill hazardous wastes into existing waste management units after the effective date of this rule. EPA does *not* intend to bring under subtitle C regulation existing waste management units containing wastes now identified as non-Bevill to which only Bevill wastes or other non-hazardous solid wastes are subsequently added (i.e., this practice will not constitute active management of the non-Bevill waste(s)). For example, a waste management unit receiving a high volume slag excluded from Subtitle C regulation under today's rule may continue to receive additional slag (or other non-hazardous or Bevill waste stream) even if it has also received (prior to the effective date of the rule) hazardous waste now identified as non-Bevill, provided that no additional non-Bevill wastes that exhibit characteristics of hazard or are listed as hazardous are managed in these units. Continued use of an existing unit after the effective date of this rule for treatment, storage, or disposal of additional quantities of a newly listed or characteristic hazardous waste will be considered active management and will subject the entire unit and its contents to Subtitle C regulation.

4. Scope of Today's Rule

In the April notice, EPA stated clearly that its interpretations and definitions regarding the regulatory status of mineral processing wastes under the Bevill Amendment applied only to the wastes addressed in this series of rulemakings (i.e., mineral processing wastes).

Nonetheless, commenters contended that the Agency's position as articulated in the 4/17/89 NPRM with respect to the actual or potential status of coal combustion wastes was unclear. They stated that some of the interpretations and definitions proposed for mineral processing wastes would not be appropriate for application to coal combustion wastes (another Bevill special waste category), particularly the high volume and low hazard criteria presented in the April NPRM, and requested that EPA clarify its position on this issue.

EPA emphasizes that the applicability of the definitions and criteria interpretations contained within this rulemaking, as presented below, is confined only to mineral processing wastes. The Agency believes that the special wastes concept remains a flexible one, and that the criteria for defining special wastes in the mineral processing industry may not be directly transferable to the other special waste categories, particularly coal combustion wastes. (EPA noted differences in its discussion of coal combustion waste volumes in the October, 1988 NPRM.) The Agency will consider this issue further in the context of its Regulatory Determination for coal combustion wastes.

B. The Low Hazard Criterion

As discussed in the preamble to the April 17, 1989 NPRM, EPA has proposed a hazard criterion for use in determining the proper scope of the Bevill exclusion as it applies to mineral processing wastes. The purpose of the hazard criterion is to identify candidate Bevill mineral processing wastes that clearly do not present a low hazard to human health and/or the environment. Any wastes failing such a criterion should be immediately removed from the Bevill exclusion; these wastes would then be evaluated (just like any other solid waste) to determine whether they are hazardous—that is, whether they are listed or exhibit any of the hazardous waste characteristics.

The proposed hazard criterion was based on two types of tests: (1) A pH test and (2) a mobility and toxicity test. The pH test requires that a mineral processing waste have a pH between 1 and 13.5 to be considered an exempt special waste, which represents a one order of magnitude increase of the pH levels used to identify corrosive hazardous wastes (i.e., 2 and 12.5). The mobility and toxicity test requires that mineral processing waste constituents be extracted from the waste using a procedure (Method 1312—Synthetic Precipitation Leaching Procedure) that EPA believes is generally less aggressive in leaching out constituents from solid wastes than the EP Toxicity Test (Method 1310), which is used to determine whether non-Bevill solid wastes exhibit the toxicity characteristic. The waste extract is evaluated in the same manner and at the same regulatory levels as in the EP Toxicity test. As EPA explained in the April NPRM, the low hazard criterion is solely a preliminary screening device to determine which mineral processing wastes are special wastes, and will not be used in determining which wastes will subsequently be regulated under Subtitle C, either as a result of today's rule or in the upcoming regulatory determination.

Comments on the low hazard criterion are organized in this preamble into general comments on the appropriateness of the criterion, followed by general comments on the overall approach, and specific comments on potential components of the approach (i.e., pH test, ignitability and reactivity tests, mobility and toxicity test, constituents for testing, additional standards, application of tests, and types of information).

1. Appropriateness of Establishing a Hazard Criterion

Many comments were received on whether EPA should include a hazard criterion for identifying which wastes should not be subject to continued temporary exclusion from RCRA subtitle C requirements under the Bevill Amendment.

a. *Low Hazard Criterion is Appropriate.* Several commenters supported EPA's proposal to use a low hazard criterion. One commenter maintained that a low hazard criterion is appropriate provided that the test used to evaluate whether the low hazard criterion is met is reasonable and appropriate for use with mineral processing wastes. Another commenter stated that Bevill exclusion status should be awarded only to those wastes that meet both the volume and hazard criteria, and yet another commenter stated that EPA should immediately remove from consideration those wastes

that are clearly hazardous, without further study.

Many commenters believed EPA's proposed low hazard criterion is objective, currently feasible, and essential to ensure that wastes that are not low hazard are appropriately regulated. Furthermore, one commenter maintained, the Agency's proposal is a positive step toward environmental protection; high volume wastes, because of their quantities, must be carefully evaluated for their potential risk to human health and the environment.

b. *Low Hazard Criterion is Inappropriate.* Many commenters believed that the low hazard criterion should be abandoned because, they generally contended, EPA's proposal to use a pH test and a mobility and toxicity test for mineral processing wastes directly contradicts Congressional intent and the decision in EDF I (*Environmental Defense Fund* v. *EPA*, 852 F.2d 1309 (D.C. Cir. 1988)), that hazard or hazard alone should not determine whether a waste falls within the scope of the Bevill Amendment. These commenters generally believed that the hazard/toxicity issue is better addressed within the special studies, not as a screening procedure, and/or that Congress intended for some characteristic wastes to be exempted from subtitle C regulation. Basically, these commenters argued that failure to pass the low hazard test should not deny a waste access to the detailed and comprehensive study and balancing of economic and environmental factors mandated by the Bevill Amendment.

EPA has re-examined the special waste concept, the regulatory and legislative history, and the Court decision prompting this rulemaking, and concludes that the hazard criterion described in the April NPRM, with some modifications, is appropriate for use in reinterpreting the scope of the Bevill Amendment. The Agency recognizes that a full and detailed assessment of hazard can and will be appropriately considered in a Report to Congress. Nevertheless, a test designed to identify any wastes that are clearly not low hazard wastes is a necessary and appropriate component of the criteria for identifying mineral processing wastes that should remain temporarily excluded from Subtitle C regulation by the Bevill Amendment. The utilization of a criterion to screen out wastes which are not low hazard is clearly required by the order of the Court of Appeals. *See* 852 F.2d 1331.

Some commenters supporting abandonment or substantial revision of the hazard criterion believed that EPA lacks the necessary data for adopting a low hazard criterion. EPA believes, however, that sufficient data are available to develop a workable and appropriate low hazard criterion for screening purposes and to apply that criterion to some mineral processing wastes. For wastes with insufficient information, EPA currently is conducting an extensive data-gathering effort. The new data will be applied to conditionally retained Bevill wastes, and their regulatory status will be addressed in a proposed rule by September 15, 1989.

2. Overall Approach

a. *Low Hazard Rather than High Hazard Wastes Should Be Identified.* Several commenters stated that EPA should identify wastes that are clearly low hazard and keep them within the Bevill exclusion, rather than identifying wastes that are clearly *not* low hazard and removing them from the Bevill exclusion.

EPA disagrees with this approach primarily because it would be impractical given the time and other constraints that the Agency faces in promulgating this rule. The special study waste concept within the context of this rulemaking necessitates identifying, using a screening procedure, wastes that are clearly not low hazard. To identify wastes that are clearly low hazard would involve the type of study of damage case and other risk-related information that is planned for the Report to Congress, because before concluding that specific wastes pose low hazard, the Agency would require site-specific data on physical and chemical characteristics of the waste, the waste management practices employed, the proximity of the facility and its waste management units to sensitive environments (e.g., wetlands, endangered species habitat) and potential receptors, and other factors that affect waste-related risk.

b. *Low Hazard Criterion Should Be Adopted Based on a Multi-factor, Qualitative, and/or Site-specific Test.* Some commenters indicated that a less quantitative approach for identifying wastes to remove from the Bevill exclusion should be utilized using an analysis of present management methods, environmental settings, and available damage cases, as well as of toxic and leachable constituents. For example, some commenters recommended that the Agency specifically consider information regarding past and current mineral processing waste management practices, which, the commenters stated, will clearly show that the wastes pose unacceptable risks to human health and the environment. Other commenters stated that mineral processing facilities generally pose less risk [than other potentially hazardous wastes] because they are sited in dry climates, far from ground water and drinking water, and in unpopulated areas.

The Agency believes that a multi-factor, qualitative, and/or site-specific approach as suggested by these commenters is infeasible. Given the Agency's time constraints, the information described could not be systematically collected and considered to implement such a low hazard criterion uniformly for all of the various mineral commodity sectors and facilities addressed by this rule. Furthermore, development of such a criterion would be very subjective and difficult to apply consistently in such a short time frame. Rather, the scope of the Bevill exclusion will be defined using the hazard criterion (and the volume criterion) in lieu of obtaining site-specific data. Wastes that fail this screening test are clearly not low hazard and, therefore, will be subject to potential Subtitle C regulation. For wastes remaining in the Bevill exclusion, EPA will collect and analyze various kinds of additional data (e.g., damage cases, site-specific environmental and waste management factors) for the Report to Congress. This additional analysis will involve consideration of the factors identified by commenters, and will ultimately support a regulatory determination for the mineral processing wastes temporarily excluded under the Bevill Amendment using the criteria established by today's final rule.

c. *Specified Tests Generally Are Appropriate.* Several commenters felt that EPA's proposal to use a synthetic precipitation leaching procedure for mobility testing is appropriate. One commenter maintained that any hazard test should be less stringent than the subtitle C characteristics tests and should demonstrate whether a waste poses a clear and unambiguous hazard to health or the environment. This testing standard, the commenter further stated, is necessary because the hazard criterion will be used as a screening mechanism to determine which wastes warrant further study; wastes failing the low hazard criterion will be evaluated like any other solid waste to determine whether it should be subject to subtitle C regulation.

d. *Specified Tests Generally Are Inappropriate.* Many commenters believed that the proposed hazard tests are inappropriate, generally recommending one of three alternatives: (1) EPA should not modify the current

standards, (2) EPA should modify the current standards, and (3) EPA should not use a leaching test to assess mobility.

Many commenters arguing against modification of the standards stated that EPA's decision to modify the characteristics test is an extreme measure to ensure that no low hazard waste would be regulated under Subtitle C prior to detailed study, at the risk of allowing many high hazard wastes to escape such regulation altogether. One commenter argued that a less stringent measure of inherent toxicity should not be used when evaluating a high volume waste, because high volume wastes have a greater potential to release significant quantities of hazardous materials. The result of the proposed hazard criterion, according to the commenter, would be stringent regulation of small quantities of waste while at the same time almost unregulated disposal of wastes that have caused documented environmental damage.

Some commenters contended that the Agency should implement less stringent modifications to the hazard tests. For example, one of these commenters stated that the allowable constituent concentrations in the extract should be 300 times the primary drinking water standard, instead of 100 times the standard (as proposed). According to another commenter, the application of 100 times the MCLs for all chemicals uniformly is of questionable validity. Others believed EPA should use the EP Toxicity Test for screening, but increase the values for comparison by a factor of 100 (i.e., 10,000 times the primary drinking water standard). These commenters noted that (1) the EP Toxicity Test is well established and widely used and considerable data exists for mineral processing wastes and (2) a relaxation of two orders of magnitude of the comparison values is similar to the proposed relaxation of the pH standard, and has been adopted by EPA's Land Disposal Restrictions program for "California List" wastes.

Some commenters argued against the use of any type of leaching test because of the apparent failure of this test to consider either the actual waste management practices being used or any other site-specific factors. Another commenter stated that because of the shortcomings of leaching procedures, the classification of wastes as hazardous or non-hazardous should not be based solely on an acid extraction test. Another commenter contended that Method 1312 yields extraction information only, and that testing for the mobility of a particular component can only be done by site-specific evaluation. One commenter argued further that the Method 1312 test only assesses mobilization of contaminants to ground water under accidental conditions; no other environmental media or exposure route is measured. Consequently, the commenter contended, the test does not provide a complete measure of a waste's potential hazard.

EPA has considered these comments and continues to believe that the low hazard criterion as proposed (i.e., the larger pH range and the more appropriate leaching procedure) is both necessary and appropriate for use as a screening tool. The Agency disagrees that this approach will leave highly hazardous wastes unregulated and free to contaminate the environment; in fact, just the opposite will happen—that is, wastes that fail the screening test will no longer be retained within the Bevill exclusion and will be evaluated like all other solid wastes as to their potential hazard. Wastes that pass the screening criterion test and are retained within the exclusion will be extensively studied, and a regulatory determination will be made as to their Subtitle C or D status within two years. Using the same toxicity factor as used in the EP Toxicity Test (i.e., 100 times the MCL) is appropriate because the attenuation and dilution expected for mineral processing wastes after release into the environment is expected to be similar to wastes managed at other industrial facilities; that is, the transport and fate of the toxic constituents should not be any different whether the waste is a mineral processing waste or some other type of solid waste. Moreover, although the standards set by statute under the land disposal restrictions program for "California List" wastes are 10,000 times MCLs, as the commenter noted, EPA has already proposed to amend these standards by using a multiplier of 100.

The Agency believes that a leaching test is the best way to assess waste contaminant mobility given the time and data constraints that EPA faces. Although EPA acknowledges that a leaching test generally only provides an indication of mobility in ground or surface water rather than in other media (e.g., air), this pathway is generally believed to be, for the purposes of this screening, the most indicative of the potential hazard posed by mineral processing wastes, and the most readily and consistently applicable to all mineral processing wastes, given the constraints of the Agency during this rulemaking. Other media will be assessed for the Report to Congress.

3. pH Test

a. *General.* Many commenters indicated that EPA's proposal to include a pH test was appropriate. Other commenters, however, felt that major modifications were needed for the corrosivity characteristic. For example, one commenter stated that the Agency should change its definition of the pH test for corrosivity so that it applies only to liquid wastes. Another commenter maintained that the approach should be revised because it is inconsistent with the Court's decision in EDF I that mining wastes exhibiting the characteristic of corrosivity, as defined in the RCRA Subtitle C regulations, may not pose a threat to human health and the environment. The application of a corrosivity hazard test to phosphate processing wastes, one commenter argued, would produce illogical and inappropriate results; it is only because aqueous phosphate waste streams are recycled that they ever consistently exhibit a characteristic of hazardous waste. This same commenter stated that for certain facilities, the pH may drop below 1.0 due solely to meteorological conditions.

EPA believes that a pH test is an appropriate indicator of hazard from liquid mineral processing wastes, regardless of whether the wastes were reused prior to their disposal. The comparison of the waste's pH to the proposed standard identifies wastes that are so corrosive that it would not be credible to consider them "low hazard" regardless of the industrial process used to generate the waste or the location of the facility.

The Agency does agree that the pH test should not be applied to non-liquid wastes. However, as discussed more fully below in section III, EPA has established a working definition of liquid and non-liquid wastes that considers the physical and chemical nature of mineral processing wastes on both an as-generated and as-managed basis. The distinction between liquid and non-liquid wastes is really significant, however, only when evaluating individual waste streams with respect to the Bevill volume criterion. Otherwise, as when analyzing waste samples in the laboratory, standard EPA definitions and protocols apply.

b. *Modification of the pH Standard.* Many commenters stated that the proposed increase of the pH range by one order of magnitude (to a pH range of 1.0 to 13.5) is correct and should not be changed. Other commenters, however, felt that the range should be increased

even further, while some commenters felt that the range should not be increased beyond the characteristic test range (i.e., 2 to 12.5).

One commenter arguing for a further increase of the pH range stated that EPA's proposed lowering of the allowable pH level by only one pH unit (1) does not reflect the intent of the Bevill Amendment, (2) unfairly penalizes operations that have improved their treatment methods, and (3) contradicts EPA's own statement that the hazardous characteristics tests need not be determinative of Bevill status. Rather, EPA should adopt a lower pH standard of 0.5, which, this commenter believed, would have no appreciable effect on human health or the environment because of the limited migratory tendencies of mineral acids.

Two commenters supporting a further increase of the pH range argued that because mineral acids used in ore processing are not appreciably buffered, the relative acidic strength of the resulting wastes is overstated by the pH measurement; adding buffering agents simply to increase the pH above 1.0 is inappropriate because such an addition would interfere with resource recovery operations. One of these commenters illustrated the point by contending that iron chloride wastes, though exhibiting a very low pH value, would otherwise satisfy the low hazard screening criteria.

As discussed above, EPA believes that the comparison of the waste's pH to the proposed pH range satisfies the need to identify which wastes clearly are so corrosive that they do not merit continued regulatory exclusion and further study. The Agency does not find the above arguments advocating a further increase of the pH range convincing; any further increase in the pH range may result in wastes that are clearly not low hazard remaining in the Bevill exclusion, which may in turn compromise the protection of human health and the environment. For instance, the fact that mineral acids are not appreciably buffered does not alter the fact that wastes of such low pH may pose a hazard. In any case, today's rule will not create undue incentives to buffer mineral processing acids above the 1.0 level, since sampling of all high-volume wastes is now complete.

A commenter arguing for no increase of the pH range beyond subtitle C characteristic levels believed that (1) the proposed rule is arbitrary, (2) it will allow too many wastes to remain within the Bevill exclusion, and (3) EPA's primary goal of protecting human health and the environment will be compromised.

The Agency continues to believe that a one order of magnitude increase in the pH range is entirely appropriate as a screening criterion to determine which mineral processing wastes are clearly too corrosive to remain exempt pending detailed study. EPA also disagrees that environmental protection would somehow be compromised by failure to use the subtitle C pH range for purposes of identifying special wastes. EPA stresses that wastes remaining under the Bevill exclusion still will be evaluated further for specific hazard (including corrosivity) during development of the Report to Congress.

4. Ignitability and Reactivity Tests

Many commenters supported the Agency's tentative position to not screen mineral processing wastes for ignitability or reactivity. Some noted that the RCRA hazardous characteristics tests for ignitability and reactivity are not readily adaptable for a screening function and, particularly in the case of reactivity, are far too subjective to be employed in the manner proposed for the low hazard determination. One commenter argued that the RCRA tests for ignitability and reactivity should not be used to judge low hazard because they fail to identify unambiguously high hazard mineral processing wastes. Another commenter noted that ignitability is irrelevant to most mineral processing wastes because most of these wastes tend to be earthen or aqueous.

For three main reasons, EPA agrees that the RCRA tests for ignitability and reactivity are not appropriate and should not be used in the low hazard criterion: (1) The Agency currently has little or no actual data on the potential reactivity or ignitability of most mineral processing wastes, (2) the tests for ignitability and reactivity, because of their nature, cannot be readily modified for use as part of a screening criterion to identify wastes that are clearly not low hazard, and (3) despite the paucity of actual test results, the Agency does not believe, based upon best engineering and professional judgment, that mineral processing wastes are particularly ignitable or reactive.

5. Mobility and Toxicity Test

The majority of comments on the hazard criterion addressed the proposed mobility and toxicity test. For purposes of this notice, these comments are organized into appropriateness of (1) the EP Toxicity and TCLP Tests, (2) the proposed Method 1312, and (3) other types of tests.

a. *EP (Method 1310) or TCLP (Method 1311) Tests.* Many commenters supported EPA's contention that more appropriate tests than Methods 1310 or 1311 may exist for evaluating mobility and toxicity. Both of these tests are based on an assumption that, under a plausible worst-case mismanagement scenario, wastes might be co-disposed with municipal solid wastes, and several commenters argued that this disposal scenario is implausible for mineral processing wastes. The EP Toxicity Test, one commenter stated, does not correctly represent other conditions experienced by the mineral processing industry, such as low precipitation and high waste volume. Some commenters noted that this same argument should apply to mineral processing wastes removed from the Bevill exclusion, which, they stated, would be in contrast to EPA's statement in the April NPRM that mineral processing wastes removed from the Bevill exemption will be subject to Subtitle C if they exhibit EP toxicity, and that the EP test may be used to determine whether Subtitle C requirements qualify as "applicable or relevant and appropriate requirements" at CERCLA sites.

Other commenters disagreed, however, with EPA's proposal not to use the EP Toxicity Test. These commenters noted the test's well-established reputation, and the large amount of data already collected by the Agency. EPA proposed Method 1312, they argued, without demonstrating the inadequacy of the EP or TCLP tests (e.g., EPA has not demonstrated that the EP or TCLP tests significantly and consistently overestimate leaching of metals from mineral processing wastes). These commenters went on to note that the argument that monofill disposal implies that the EP test is inappropriate for mineral processing wastes clearly was rejected by EPA in promulgating the EP test in 1980. Furthermore, the commenters stated, not using the EP test because of the nature of the extraction medium falsely assumes that each processing waste is disposed of in a manner that precludes it from coming into contact with other processing or mining wastes when, in fact, there is strong reason to presume an acidic disposal environment. These commenters contended that (1) many mining and metallic ore processing wastes have significant acid generating potential (which may result in very acidic conditions, even in a monofill), (2) many wastes are stored or disposed in unlined units, (3) many sites are located in conjunction with mining and other similar activities, (4) many exempted wastes are themselves acidic, and (5) EPA's use of a 100-fold dilution/

attenuation factor is sufficiently modified to account for variability in leaching conditions. EPA, they believed, should consider that exposure of non-acidic wastes to acidic conditions through commingling with other wastes, leachate, or contaminated runoff is a highly plausible scenario and certainly a reasonable worst-case scenario.

The Agency acknowledges the well-established reputation of the EP Toxicity Test and the large amount of EP extract data for mineral processing wastes, but nevertheless believes that the EP and TCLP tests and data generally are inappropriate for identifying mineral processing wastes which are "clearly not low hazard" under today's screening process and thus should be removed from the Bevill exclusion. The purpose of the EP and TCLP tests are to determine which solid wastes are "hazardous wastes" under sections 1004(5) and 3001(a) of RCRA; by contrast, today's hazard criterion determines only whether a waste should be temporarily excluded from regulation under section 3001(b)(3).

EPA agrees that mineral processing wastes may be disposed in acidic environments; however, the acids to which they will usually be exposed are mineral acids, rather than organic acids such as that used in the EP and TCLP tests. This fact is central to EPA's use of Method 1312 for evaluating the hazard of mineral processing wastes. In contrast to the disposal of municipal refuse, mineral processing wastes are unlikely to be managed in environments that contain or are capable of generating organic acids, such as the acetic acid formed by decaying garbage; mineral processing wastes, with very few exceptions, do not contain appreciable quantities of organic matter. Thus, EPA believes that use of the EP or TCLP would identify certain mineral processing wastes as not low hazard which EPA believes are appropriate for further study under section 8002(p).

Concerning the use of existing EP/TCLP extract data, and as stated in the April NPRM and discussed in Section III of this preamble, EPA will use existing EP extract data to help evaluate whether a waste stream which fails the basic toxicity test (using Method 1312) should nonetheless remain within the Bevill exclusion under certain conditions. EPA believes that use of EP/TCLP extract data in this fashion is appropriate to account for possible anomalies in the Method 1312 results, since EPA concedes that Method 1312 has not been used in a significant number of past cases.

As already stated, waste streams that are removed from the Bevill exclusion because they do not meet one or more of the Bevill criteria are not special wastes, and will be evaluated for possible regulation under subtitle C in the same manner as any other industrial solid waste. EPA believes that use of the EP (or, in the near future, the TCLP) is appropriate for non-Bevill mineral processing wastes removed from the exclusion today because EPA does not have reason to believe that the worst-case mismanagement scenario would be implausible for such low-volume wastes. Thus, these tests are appropriate for determining the hazardous characteristics of particular waste streams that are potentially subject to regulation under RCRA section 3001 without further study.

Commenters arguing for use of the EP Toxicity Test also noted several sources of information that indicate that the use of organic acids may affect the leaching of lead differently than of other metals. In addition, they stated, the reproducibility of these test procedures could be adversely affected with respect to lead. They noted one study that suggested that in cases in which lead was the only constituent that leached above regulatory thresholds, an additional test (e.g., using sulfuric acid) should be used to eliminate the effect of organic complexation while still retaining the acidic conditions. One group of commenters postulated the inappropriateness of Method 1312 (and argued for a more aggressive leaching method) by citing a certain study's evaluation of the waste extraction test (WET) and possible alternatives. This study, they said, demonstrated that tests other than WET—similar to Method 1312 according to one commenter—suffer from very low or no ionic strength and buffering capacity. The study authors, they contended, rejected claims that organic acids employed by WET, EP, or TCLP are overly aggressive.

EPA recognizes the potential differential treatment of the EP test with respect to lead-containing wastes (because of the organic acid used in the test). But, because Method 1312 does not use an organic acid, this difference is not expected to be a problem. In fact, recent results of comparisons between Methods 1310 and 1312, which EPA examined to respond to these comments, indicate that the difference in aggressiveness between the two methods with respect to lead is greater than the difference with respect to other contaminants. (See below for additional discussion on this point.)

One commenter argued that the use of a deionized water extraction test to measure inherent toxicity of smelter slag is inappropriate because deionized water generally exerts minimal extraction from slags and does not reflect conditions to which slag is exposed in the natural environment. Other commenters, however, argued that deionized water extraction is well tested and is mild enough to screen out only the highly hazardous wastes which, they contended, are the only wastes that EPA should be trying to eliminate from the exclusion at this time. A neutral water method, one commenter went on to state, is an appropriate basis for evaluating which wastes removed from the Bevill exclusion meet the criteria for hazardous waste regulation.

As indicated in the April proposal, the data from deionized water extraction tests were used as surrogates since there was very little data on mineral processing wastes available at the time using Method 1312. However, Method 1312 uses simulated acid rain as a leaching fluid to attempt to reflect conditions in the environment. For this reason, EPA believes that it is a more accurate screening tool than would be the deionized water extraction method. While Method 1312 is expected to be slightly more aggressive than the deionized water extraction test, it is still expected to be less aggressive than the EP toxicity test, and hence, more appropriate as a screening tool.

Since the proposal, EPA has collected samples of all potentially high volume mineral processing wastes for analysis using Method 1312. EPA has been able to complete laboratory analyses of samples from seven of the nine high volume wastes for which EPA used deionized water or EP toxicity data to propose hazard determinations in April. Now that the Method 1312 data are available, the Agency need not rely solely on neutral water or other test data. EPA notes here that the new sampling and analytical data obtained using Method 1312 confirm the Agency's earlier findings with respect to which of the nine wastes are and are not low hazard.

b. *Method 1312—Simulated Acidic Precipitation Procedure.* Several commenters supported EPA's proposed use of Method 1312 for testing the hazardous leachability of mineral processing wastes. Some endorsed the move toward Method 1312 because they felt it was more appropriate than the EP Toxicity Test (although they believed that improvements could be made). Many others contended that, for a variety of reasons, Method 1312 was inappropriate for determining low hazard. The reasons noted related to general issues, as well as the method's supposed lack of representativeness of

the environmental conditions to which mineral processing wastes generally are exposed, the lack of available data to evaluate its accuracy, the contention that the method is not less aggressive than current methods, the questionable applicability of the method to local and/or mineral processing conditions, and finally a variety of specific technical issues. These comments are addressed in detail below.

i. *General.* Several commenters stated that Method 1312 was not finalized and could not be replicated. According to one commenter, EPA must abandon Method 1312 and instead rely on the RCRA section 8002(p) factors to study all mineral processing wastes.

EPA believes that, although Method 1312 was not finalized via a final rule at the time of the proposed rule, sufficient data were available in the docket to conduct an appropriate evaluation of the method's suitability as a mineral processing waste screening test. Furthermore, in response to these comments, EPA has examined additional data which have become available since the proposal (these data may be found in the docket for this rulemaking). In response to the suggestion that a RCRA section 8002(p) study should be conducted to evaluate hazard, and as discussed previously, EPA believes that a quantitative screening test is the most appropriate method for identifying wastes which are not low hazard, as required by the EDF II. The Report to Congress will be conducted only for the wastes remaining in the Bevill exclusion.

Many commenters stated that EPA should make the toxicity standards for liquid wastes less stringent because, as proposed, the Agency would be measuring low hazard at the same constituent concentration values used to determine whether a liquid waste exhibits a characteristic of hazardous waste; specifically, the method would impose the same criterion for liquid mineral processing wastes as would the EP Toxicity Test (Method 1310). This judgment is counter, they argued, to EPA's intention of developing a test to determine which wastes are clearly not low hazard, and is contrary to the ruling of EDF I, which maintained that the Bevill Amendment was designed to temporarily suspend regulation of special wastes under subtitle C, irrespective of whether they fail hazardous characteristic tests. As an alternative, some commenters recommended, EPA should adopt the approach used by Congress in identifying liquid hazardous wastes subject to land disposal restrictions. Finally, several commenters suggested increasing by one order of magnitude the contaminant concentrations used to determine the hazardousness of the liquid.

EPA believes that an adjustment of the screening tool for determining which wastes containing less than 0.5 percent solids are not low hazard is inappropriate, because the purpose of the 100-fold increase of the MCL is to account for dilution/attenuation of the dissolved contaminants in the environment. As already indicated, the Agency believes that once contaminants are in dissolved form and available for dispersion in the environment, the same standard should be applied to evaluate their toxicity, regardless of whether the solution tested is a waste sample or a test extract.

ii. *Evaluating the Accuracy of Method 1312.* Some commenters stated that the limited tests that have been performed on Method 1312 focus on only two of the eight metallic constituents of concern (lead and cadmium) and, therefore, are not adequate to support application of Method 1312 to a wide variety of processing wastes. Furthermore, a commenter stated, the Agency should question the accuracy of the interlaboratory testing which compared Methods 1310, 1311, and 1312 only for the parameter of lead and gave no information regarding the effectiveness of these methods on the leachability of other elements. One commenter believed that Method 1312 is inadequate as a screening test because (1) the degree to which 1312 is less aggressive than 1310 is unknown and (2) many data that are available for waste streams using 1310 and 1311 will become unusable if Method 1312 becomes the test. This commenter, however, supported EPA's proposal that data from Methods 1310 and 1311 should be used to a limited extent if Method 1312 remains as the mobility and toxicity test.

As discussed above, EPA believes that both the previous and the current test data for Method 1312 adequately prove the usefulness of this method for the purposes stated. In addition, the effectiveness of Method 1312 (e.g., compared to Method 1310) on elements besides lead has been confirmed (supporting data may be found in the docket for this rulemaking). By definition, a screening test is designed to be accurate only to the extent that it separates out only those segments of a population (in this case mineral processing wastes) that clearly do not meet a certain set of criteria (in this case low hazard). EPA reiterates that Method 1312 is only being applied as a screening test to identify wastes that clearly are not low hazard and therefore do not qualify for a Bevill exclusion. Those wastes that do qualify will still be further evaluated to determine what controls are needed.

iii. *Applicability of Method 1312 to Mineral Processing Wastes and Soils.* According to several commenters, Method 1312 is inappropriate to determine the mobility of contaminants in mineral processing wastes and wastewaters because the method originally was designed for testing contaminant migration in soils.

EPA disagrees that Method 1312 is inappropriate for this or any other reason. The original purpose of Method 1312 is irrelevant to its purpose in this rulemaking, just as its purpose here is irrelevant to other rules that do not involve identification of wastes subject to the Bevill exclusion. For the reasons presented throughout this preamble and in the background document to this rulemaking, Method 1312 is believed to be appropriate for use on mineral processing wastes within the context of the Bevill exclusion hazard criterion.

iv. *Appropriateness of Method 1312 as a Modification of the Standard.* As stated previously, several commenters acknowledged Method 1312's appropriateness as a modification of the mobility and toxicity standard. According to some commenters, however, the use of Method 1312 would not represent a less aggressive standard and, therefore, would be contrary to Congressional intent. They contended that, contrary to EPA's claim, Method 1312 is not consistently less stringent than the existing hazardous waste characteristics tests; for example, in one EPA test, Method 1312 leached more lead than the EP Toxicity Test in 12 of 18 analyses conducted on two soil samples. Before Method 1312 is incorporated into a formal rulemaking, they stated, data should be gathered to unequivocally demonstrate that the leachate concentrations will not be greater than those obtained by Method 1310.

The Agency believes that, in general, Method 1312 will be less aggressive than the EP test and the TCLP test. The following excerpt is from the EPA test report referred to by the commenters as an explanation of the results for the two samples described by the commenters:

> Method 1312, which is in essence a distilled water extraction solubilized very little lead except for the two North Carolina samples, 5 and 6, which contained very high levels of lead in the bulk soil. Results by Method 1310 for these same two soils were in general

agreement with the 1312 results because no acetic acid was added during the 1310 extraction of these two soils. That is, for both methods the extracting fluids were nearly identical for these two samples.

In other words, these two unusual soil samples from a Superfund site were both highly acidic and very highly contaminated. In this situation, the EP test and Method 1312 provided essentially the same results. It is also of note that the TCLP, which will replace the EP, was significantly more aggressive than either the EP or Method 1312 for these two samples. The results from these two samples and the conditions of the sites where they were collected are in contrast to the conditions typically found at and sampling results derived from mineral processing facilities, as indicated by EPA's recent sampling program and laboratory analyses using Method 1312.

v. *Applicability of Method 1312 to Local and/or Mineral Processing Conditions.* Some commenters stated that Method 1312 is not applicable to mineral processing operations located in certain areas because the pH of the testing medium is not representative of rainfall in those areas and would potentially yield erroneous results; furthermore, because many mineral operations are in arid areas, the Method 1312 procedure of saturating the waste sample in an acid solution for 18 hours is non-representative of these sites. Other commenters believed that Method 1312 will produce misleading results because it (1) unrealistically targets certain elements in Bevill wastes, (2) produces leaching results that bear no relationship to actual management practices, and (3) fails to account for site-specific conditions. One commenter suggested that EPA allow the extraction fluid for mineral processing wastes to depend on the region of the country where the waste is managed (e.g., a pH of 4.4 could be used for east of the Mississippi, and a pH of 5.2 could be used for west of the Mississippi).

Although Method 1312 includes two different extraction fluids for soils to attempt to account for geographic variations in rainfall, this variation is appropriate only for evaluating in-place soils since their geographic location is known. For evaluating wastes for a national regulation, the Agency cannot assume that all of a particular waste will be generated and managed in any particular location or region. Therefore, to be conservative in protecting human health and the environment, the Agency will apply the pH 4.2 extraction fluid to all mineral processing wastes.

vi. *Specific Technical Issues.* A variety of specific technical issues were presented by commenters. One commenter argued that EPA should abandon the use of the Zero Headspace Extractor (ZHE) in Method 1312 because its erratic results with the extraction of volatiles is a troubling source of unexplained variation. Another commenter arguing against the applicability of Method 1312 stated that the proposed batch test approach does not account for the time dependent and flow dependent kinetics of the mobilization of species from wastes and will overestimate the resultant concentrations when compared to a natural system.

In response to the first point, the Agency believes that it is unlikely that most samples will contain volatile organics at levels of concern, nor does the Agency plan on assessing volatile organics in metal processing wastes; thus, there is no reason not to use the ZHE with the test. Concerning the second point, EPA agrees that overestimates may result, but has already accounted for potential overestimation by the use of a multiplier of 100 for the drinking water standards that are used for comparison.

Many commenters addressed specific aspects of the leaching liquid that should be used for Method 1312. For example, will the extraction fluid be brought into equilibrium with the carbon dioxide in the air? If so, they stated, the buffering capacity of the fluid will change over time if the fluid is mixed and then stored. For consistency, therefore, the description of Method 1312 should state that the fluid is to be mixed immediately before use, or brought into equilibrium with atmospheric carbon dioxide.

Another commenter on the extraction fluid used for the Method 1312 test stated that a carbonic acid/sulfuric acid/nitric acid cocktail, which has been specifically prepared to simulate precipitation, should be used. Another commenter added that, if EPA were to use Method 1312, the extraction fluid volume should be increased from 20:1 to 50:1, or the MCLs should be increased for wastes which have pH's below those of the recommended extraction fluids. One commenter contended that there are technical difficulties in using the deionized water required by Method 1312. For example, the commenter stated, deionized water can have variable pH levels which could lead to inconsistent results. Some commenters stated that, rather than Method 1312, EPA should use ASTM D 3987 (a distilled water leach test) as a more appropriate screening test.

The Agency believes that Method 1312, as described in the background document to this rulemaking, is appropriate as a screening test for mineral processing special study wastes. The current extraction fluid formulation has been adequately tested and does not need modification, and the rationale for reducing the stringency of the comparison toxicity levels for wastes with low pH levels is unclear. The statement that deionized water can have variable pH levels is sound, but this should not pose a problem because the pH is subsequently adjusted to reflect acid precipitation. Finally, given that Bevill mineral processing wastes are by definition generated in large volumes, there is no justification for increasing the extraction ratio (e.g., from 20:1 to 50:1) to simulate actual environmental conditions when evaluating candidate wastes using Method 1312.

If EPA chooses to promulgate Method 1312, some commenters stated, it should address whether a particle size reduction step is appropriate or if the step creates additional surface area that artificially elevates leachability. Another commenter contended that EPA should replace the particle size reduction requirement in Method 1312 with the Structural Integrity Procedure because a number of mineral processing wastes exist as inert, monolithic wastes that are unlikely to be physically degraded in a landfill. This commenter stated that congressional floor debate indicated recognition of this fact. One commenter believed that the selected particle size in the proposed Method 1312 is not a good analog of the particle size distribution in spent ore materials from heap leaching, and another commenter stated that the concept of particle size reduction should be eliminated altogether from Method 1312 and wastes should be tested in their natural state.

The Agency believes that, with respect to particle size reduction, there is a wide variety of particle sizes among the candidate Bevill wastes. In order to achieve analytical results that are broadly applicable across sites and over time, the particle size reduction step is necessary in order to ensure that the smaller particles in the waste as generated or after disposal are adequately represented and that the Agency has data with which to make regulatory decisions for an entire sector based upon sampling results from a small number of facilities.

c. *Other Types of Tests.* One commenter objected to the separate test proposed for wastes suspected of containing cyanides. The commenter contended that EPA must choose either the extraction solution proposed for

cyanide, or that proposed for metals; to propose a separate extraction solution to assess cyanide and metals singularly is illogical and technically incorrect. Some commenters stated that EPA should utilize a method developed by the California State Water Resources Board that estimates acid-forming potential of mining wastes, because EPA should not classify mineral processing wastes with significant acid-forming potential as low hazard. Acid Mine Drainage (AMD), the commenters contended, is one of the most serious environmental concerns at mining sites and is pertinent to the mineral processing waste issue given the potential for processing waste storage at mining sites and the potential for processing waste disposal sites to become acidified.

One commenter stated that an appropriate test for inherent toxicity should account for complexing as a release mechanism for metals; for instance, the ASARCO smelter located near Tacoma, Washington disposed slag in low lying areas rich in organic matter, which has resulted in high metals loadings being released into local waterways.

EPA disagrees with the suggestion that the separate test for cyanides be eliminated. Separate tests are appropriate, because metallic elements in solid samples must be acid-digested for analysis, while cyanides can be extracted using less aggressive methods. Acid digestion of cyanide-bearing materials is also dangerous, because it can generate deadly HCN gas. In order to both collect accurate analytical data and protect laboratory personnel, EPA will continue to use separate testing methods. The Agency agrees that acid mine drainage is one of the most serious environmental concerns at mining sites. At this point, however, the Agency is only applying a screening test (Method 1312) to identify those wastes which clearly do not qualify for the special waste exclusion. Those wastes that do qualify will be further studied to determine the need for additional controls, and the acid-forming potential of those wastes is one of the factors that will be evaluated. Finally, the Agency believes that it is technically infeasible to consider factors requiring site-specific data, such as organic complexation of metallic contaminants, in a screening test. This and other risk-related variables will instead be considered for the Report to Congress on wastes retained within the Bevill exclusion.

6. Constituents for Testing

a. *Constituents Proposed in Mobility and Toxicity Test.* Some commenters stated that a major problem with the proposed constituents to be used in the mobility and toxicity test is that no distinction is made between the hexavalent and trivalent forms of chromium, which is important given that EPA has described hexavalent chromium as the more toxic form. One commenter noted that EPA has (1) decided to consider only hexavalent chromium concentrations when listing solid wastes as hazardous wastes and (2) excluded from Subtitle C regulation wastes that fail the EP Toxicity Test due primarily to the presence of trivalent chromium. The commenter claimed that the Bevill status of wastes associated with the processing of titanium ore which contains only trivalent chromium would be affected by the proposed approach.

EPA believes that total chromium concentration is a more valid and environmentally protective indicator of hazardous potential than is a measure of hexavalent chromium, principally because chromium-bearing wastes may be exposed to oxidizing conditions in the environment (which would transform trivalent chromium to hexavalent chromium). Therefore, measuring only hexavalent chromium in mineral processing wastes on an as-generated basis might yield an inaccurate indication of (i.e., understate) actual degree of hazard. Thus, EPA will continue to compare total chromium leachate concentrations to the health-based level for hexavalent chromium. This same concern is reflected in EPA's proposed Toxicity Characteristic rule (51 FR 21648), and was the primary basis upon which six low volume mineral processing wastes were listed (53 FR 35412) in response to the same federal Appeals Court ruling that precipitated this rulemaking (EDF II).

Another commenter stated that EPA should modify the low hazard test so that it focuses on a narrower range of constituents than the EP Toxicity Test. For example, they stated, silver poses no threat to human health and should not be considered hazardous; EPA's proposal to delete the MCL for silver under the SDWA is further evidence that silver is not hazardous.

EPA maintains that the basis for developing the low hazard criterion is the existing evaluation of the four factors (EP toxicity, corrosivity, ignitability, and reactivity) used to identify characteristic hazardous wastes. Silver is one of eight metals included in the EP toxicity test, which is designed to assess potential risk by comparing contaminant concentrations with human health-based standards. Because the Agency has not taken final action reflecting a decision to eliminate silver as a contaminant of concern, EPA will continue to utilize measurements of silver concentration as an element of the low hazard criterion.

b. *Other Constituents.* Several commenters stated that EPA should incorporate additional MCLs or other health standards, such as reference doses, particularly for incorporating fluoride, cyanide, manganese, and nickel into the low hazard criterion. Another commenter believed that it would be highly inappropriate to incorporate additional constituents or measurements beyond the existing EP toxicity contaminants in the mobility and toxicity test.

Remaining comments on the question of other contaminants focused on whether EPA should include radionuclides as a constituent for evaluating the hazard potential of phosphogypsum and other processing wastes. Many of those favoring the inclusion of radionuclides stated that data demonstrate that several wastes generated by the elemental phosphorus sector (furnace scrubber blowdown, process wastewater, and slag) and by the phosphoric acid sector (e.g., phosphogypsum and process wastewater) have leached radium-226 and/or gross alpha particle radioactivity at levels exceeding 100 times their respective MCLs. In the latter case, they noted, alpha radioactivity leached at levels exceeding 1000 times its MCL. Another commenter argued that based on existing cancer incidence data, any waste containing 5 pCi/g or more of radium-226 should be considered hazardous. In addition, the commenter noted, EPA has recognized that phosphogypsum has radium-226 concentrations consistently in the range of 25 to 35 pCi/g.

One commenter questioned any inclusion of radionuclides as a constituent for evaluating the hazard potential of phosphogypsum because of the proposed rule regarding the National Emission Standards for Hazardous Air Pollutants (NESHAPS), which addresses the regulation of radionuclides. The analysis described in that proposed rule, the commenter noted, should satisfy any valid concerns regarding residual radioactivity from phosphate industry wastes, and potential groundwater contamination could be addressed by the RCRA section 8002(p) study.

One commenter argued that there is no basis in RCRA for consideration of radioactivity in determining low hazard; radioactivity is not a characteristic of hazardous waste under Subtitle C, and it

must not be used. Phosphogypsum, according to this commenter, may exhibit radioactivity because of naturally occurring radionuclides, but both Congress and EPA have already given the radiological aspects of phosphate processing extensive consideration, making it unnecessary for the Agency to establish a "bright-line" test for radioactivity.

Another commenter stated that screening mineral processing waste streams out of the Bevill exclusion based solely upon radioactive characteristics without developing standards relevant to the harmfulness of these wastes would not be appropriate because the waste would subsequently fall under Subtitle C regulation, which may not be applicable to radioactive waste; a facility that had a waste removed from the Bevill exclusion might be required to incur substantial expense without public health benefit.

EPA believes that radioactivity and other constituents suggested by commenters should not be included as components of the hazard criterion because they are not addressed in the hazardous waste characteristic tests, which are the cornerstone of and reference point for the low hazard criterion. EPA believes that it would be logically inconsistent to remove a waste from the Bevill exclusion during this screening on the basis of a hazard characteristic that would not, by itself, cause the waste to be regulated under subtitle C. These constituents will, however, be considered in the detailed studies that will underlie the Report to Congress on Bevill mineral processing wastes. Accordingly, the potential risk posed by the radioactive or other nature of any of these wastes will be addressed in detail within the next year. EPA plans to utilize data developed for the radionuclide NESHAP as part of this evaluation.

7. Additional Standards

Many commenters stated that, although the Agency's use of MCLs to measure hazard to human health is supportable, a major deficiency in the approach is the use of the MCL for arsenic (a frequent constituent of processing wastes) in evaluating human health risk; arsenic's carcinogenicity mandates a more stringent standard for human health. Specifically, a 10^{-6} risk level for arsenic was suggested. These commenters also contended that EPA should not rely solely upon the MCL, but instead utilize the lowest standard from among the chronic ambient water quality criteria, MCL, cancer risk level, or oral reference dose for given substances, and then apply the 100-fold dilution factor to establish an appropriate low hazard standard. In addition, these commenters stated, the proximity of many processing sites to drinking water supplies, underlying groundwater, and human populations, as well as numerous damage cases demonstrating risks to public health, argues for a measure of hazard that directly addresses human health.

Commenters also stated that many substances present in processing wastes are more toxic to aquatic organisms than to humans. Moreover, MCLs do not exist for some toxic substances whereas ambient water quality criteria have been developed for many additional substances. Furthermore, EPA has stated in the uncompleted 1988 draft Report to Congress on selected mineral processing wastes that all of the potentially hazardous wastes studied had constituent leachate concentrations that exceeded ambient water quality criteria.

In addition, these commenters added, a number of the mineral processing wastes exceeded hazardous waste standards even when extracted with water. All the copper, zinc, and lead processing wastes, they stated, contain arsenic at levels that exceed a 10^{-5} lifetime cancer risk level; even the minimum concentrations of copper process wastewater, copper acid plant blowdown, copper bleed electrolyte, and zinc process wastewater sampled exceeded this cancer risk level.

In contrast, several commenters stated that for a variety of reasons EPA should not use additional standards. One commenter stated that an aquatic organism or radiological standard should not be used because aquatic organisms and radiological concerns are amply addressed by statutes other than RCRA. Another commenter stated that the aquatic organisms standards are inappropriate for the following reasons: RCRA is almost exclusively a human health-based program; the protection of aquatic organisms is not an integral part of RCRA; other statutes protect aquatic organisms; and mineral processing waste streams are often closed-loop and entirely contained within the facility.

Although the Agency strenuously disagrees with the contention that the scope of RCRA is generally restricted to protection of human health rather than more broad additional protection of the environment, it has decided not to augment the standards that were presented in the April notice. Part of the reasoning behind this decision is not that these standards are irrelevant, but that applying them requires site-specific data that are not currently available for most candidate mineral processing wastes. For example, applying Ambient Water Quality Criteria in any realistic way requires site-specific information on the flow of potential receiving waters, which vary over many orders of magnitude between sites. A more important argument, however, for retaining the standards proposed in April is related to the argument presented in the previous section on other constituents: EPA believes that other standards and criteria suggested by commenters should not be included as components of the hazard criterion because they are not addressed in the hazardous waste characteristic tests, which are the basis for the low hazard criterion. During the Report to Congress, however, many of the additional standards and criteria referred to by commenters will be addressed.

8. Application of Tests

Some commenters disagreed with EPA's proposal that wastes fail (i.e., are removed from the Bevill exclusion) when two or more facilities fail the hazard criterion. Many believed that the proposed "two-facility" decision rule is not stringent enough and the proposed plan to sample waste streams and apply Method 1312 ignores existing data, while others argued that the proposed application of the tests would be arbitrary and capricious. One commenter questioning the statistical accuracy of the "two-facility" test suggested that EPA sample a significant majority of the waste streams. Another commenter added that even if one could accept the statistical validity of making a recommendation based upon only two samples, the samples used in the test may have demonstrated entirely different characteristics; for example, one of the samples could have represented Missouri ores and the other Western ores.

The Agency stresses that it must make decisions, using limited data and within certain time constraints, about the degree of hazard posed by mineral processing wastes. Therefore, the screening approach described in the April NPRM and refined in today's preamble was developed to identify wastes that clearly are not low hazard and therefore should not remain within the Bevill exclusion. In response to comments, EPA has refined the hazard criterion to allow for the use of additional relevant data when a waste is generated at five or more facilities (see section III for details). Moreover, EPA has collected additional data on the nine high volume wastes for which the Agency proposed unconditional

Bevill exclusion decisions in April. Data on other candidate Bevill mineral processing wastes will not be available until the September proposal.

The "two-facility" rule, the Agency believes, is appropriate when either (1) substantial additional relevant data are not available or (2) less than five facilities generate the waste. In the latter case, the rule translates into the question of whether half or more of the facilities generate a mineral processing waste that fails the comparison of the Method 1312 extracts to the toxicity levels. The Agency believes that the "two-facility" rule is a reasonable balance between too much and too little stringency. As for whether failure for different constituents at different facilities proves the inadequacy of the two-facility test, EPA believes that this type of situation is precisely why the low hazard criterion (and the characteristics tests upon which it is based) contains multiple factors. It matters little why a particular waste is not low hazard at one site or at multiple sites. What is important is that EPA has a method of identifying the mineral processing wastes that are not low hazard, for whatever reason.

EPA, one commenter noted, should require that the pH values for comparison be the average of a statistically valid number of samples that are representative of the waste stream; otherwise non-representative samples could incorrectly label an entire waste stream as hazardous. The Agency believes, however, that using the median rather than the average of the pH values when more than two samples are available for a facility is more appropriate because pH is measured on a logarithmic scale; the average of the anti-logs of multiple values will always be dominated by the lowest value.

Some commenters recommended that EPA determine that a processing waste passes the low hazard criterion if it passes the criterion for any single facility generating that waste. The Agency believes, however, that this approach would be insufficiently protective and exempt wastes which are clearly not low hazard at a significant number of facilities.

9. Types of Information

a. *Constituent Information.* Several commenters argued that a new sampling effort is inappropriate because the Agency already has compiled information on processing wastes in the phosphoric acid, tin, and titanium ore processing sectors; in addition, this information indicates frequent and large exceedances of the EP characteristic trigger levels. These commenters also argued that EPA already has extensive EP and water leaching data (in the draft Report to Congress) on processing operations in the copper, lead, zinc, and bauxite sectors, and, therefore, the Agency need not conduct a wholly new sampling effort.

EPA reiterates that it does not have adequate information to evaluate most candidate Bevill mineral processing wastes against the hazard criterion developed for this rulemaking (i.e., mobility and toxicity test using Method 1312), which EPA believes is the most appropriate test for this purpose. Therefore, a new sampling and waste characterization effort is vital if the Agency is to apply the hazard criterion and complete the rulemaking process. As discussed elsewhere in this preamble, existing EP toxicity or other data may be used if necessary.

One commenter recommended that appropriate testing methods for determining low hazard consider the hazard of the waste deposit as a whole (i.e., including older waste) and not just the new waste entering the deposit for the following reasons: (1) Time is important in stabilizing the waste; (2) the environmental concern is for influences and releases over an extended period of time; and (3) it is much more likely that long-term leaching behavior rather than immediate release will be important.

The low hazard criterion is designed to be a screening test that uses readily obtainable data. Conducting statistically meaningful sampling and analysis of large quantities of existing material (hundreds of millions of tons at some facilities) is well beyond the proper scope of such a screening test. Moreover, because the removal of the Bevill exclusion will not be applied retroactively (as discussed previously), the Agency believes that characterizing wastes as they are generated is far more relevant to addressing the low hazard criterion than are analytical data on accumulated wastes. As indicated above, data on older waste when it was generated may be used in specific situations.

b. *Damage Information.* Commenters stated that damage cases examined by EPA (in the draft Report to Congress) revealed numerous instances of environmental contamination as well as human health risks created by processing waste sites. In addition, they contended, EPA has had a considerable volume of data on environmental contamination from processing sites since at least 1984. One example where this information should have been used, they stated, was EPA's proposed classification of lead slag as low hazard, when out of the five active lead smelters, one lead smelter is on the Superfund National Priorities List and another has contaminated vegetation and stream sediments with heavy metals. Another commenter added that contamination caused by copper smelting slag in the Tacoma, Washington area has been documented in numerous reports: In 1983, a county health department issued a notice advising against consumption of bottom fish from the Hylebos waterway and against regular consumption of fish from other waterways in the area. The advisory, the commenter contended, was prompted by the presence of arsenic and lead in fish caused in part by smelting slag.

As indicated previously, EPA believes that, given the constraints of this rulemaking, site-specific information generally cannot be systematically considered within the hazard criterion and then applied uniformly to all of the various mineral commodity sectors distributed throughout the country. This information, however, may be considered to some extent in specific situations and definitely will be considered in detail during the study for the Report to Congress. The Agency appreciates information submitted in public comment concerning documented mineral processing waste damage cases.

c. *Risk Information.* Several commenters criticized the Agency's failure to include any risk assessment information within the low hazard criterion. By using laboratory tests exclusively, one argued, EPA disregarded current waste management practices and other important risk factors. Most minerals industry contaminants are heavy metals which are elements that cannot be destroyed or reduced to innocuous states as can organic contaminants. Thus, one commenter stated, consideration must be made in evaluating a low hazard criterion that the source itself is likely to provide the hazard. The commenter contended that to consider only the source is simpler and from a purely environmental viewpoint more acceptable, yet this approach is an inferior method of evaluating minerals industry wastes and is not in the public's best interest. Following the 8002(p) mandate to study risk, this commenter suggested, the Agency should adopt a performance-based regulation utilizing current monitoring, evaluation, treatment, and cleanup technology. Such an approach, the commenter argued, would have the advantage of considering the source and pathways at a site-specific level; the

Agency has proven that this is a viable approach by utilizing it with mining and beneficiation wastes.

Several commenters argued that EPA should consider the quantity of waste in evaluating its potential hazard. They suggested that the Agency should, through the use of a variable dilution-attenuation factor applied to high-volume wastes, incorporate a measure of waste quantity into its proposed criterion.

These commenters also suggested that EPA consider all environmental data to determine actual risk arising from mineral processing wastes. They provided data on locational characteristics of mineral processing sites in order to lend support to their argument that there is a need to consider environmental risk at least as carefully as risk to human health in evaluating processing wastes.

The Agency reiterates its position on the use of risk or other site-specific information in the application of the low hazard criterion; this type of approach is inappropriate due to time constraints and EPA's belief that the hazard criterion is a screening tool for mineral processing wastes and is not intended as a replacement for the detailed study required by statute. That study will incorporate information such as waste management practices, waste characteristics, and site characteristics.

C. The High Volume Criterion

The April 17, 1989 NPRM specified a high volume criterion to be used to identify high volume mineral processing wastes. This criterion superceded and modified the original high volume criterion contained in the 10/20/88 proposal. In the April notice, the Agency stated that a waste stream would be classified as a high volume waste if it is generated at an average rate of more than 50,000 metric tons per facility per year. To account for fluctuations in mineral commodity markets, the test was to be applied to the highest average generation rate during any one year between 1983 and 1988. The actual cutoff selected by EPA for the high volume criterion was based on large volume waste streams currently being managed under Subtitle C regulations.

1. General Comments

Several commenters objected to any use of a "high volume" criterion to determine Bevill status. In particular, one commenter argued that the criterion discriminates against those sectors which, by nature of their operations, are small or are operating at reduced levels in a depressed market. Another claimed that the use of only a high volume criterion will lead to inconsistent results by removing from exclusion mineral processing wastes that Congress intended to include within Bevill and which would be likely to remain exempt following submission of the Report to Congress, while retaining in the exclusion some high volume wastes that may be subject to stricter regulation after study for the Report to Congress.

Another commenter argued that establishing a stringent high volume criterion as a screen for permanent exclusion from Bevill is inappropriate because it severely limits the regulatory options available to address particular waste streams. They maintained that the criterion should be construed liberally because retaining a waste under Bevill merely makes it eligible for study and a subsequent determination by EPA on whether the waste should be subject to Subtitle C regulation.

Several commenters recommended that EPA not rely solely on a volume criterion to determine Bevill status. They asserted that many factors were to be studied before mineral processing wastes were regulated and, in addition, that Congress intended low volume wastes which posed significant manageability problems to still be eligible for the Bevill exclusion. They argued that the Agency should consider those "high volume" issues unique to each industry that generates such wastes, including those characteristics unusual or unique to the mineral processing industry.

As discussed at length in the April notice, the Agency rejects these arguments as inconsistent with the Court's reading of legislative intent and as contrary to the special waste concept. Only waste streams that are truly "special wastes" are eligible for examination in the Report to Congress. The high volume criterion has always been central to the special waste concept and is a necessary and appropriate first screen in the final determination of a mineral processing waste's Bevill status. Other industry-specific factors relevant to mineral processing waste management will be considered in EPA's Report to Congress addressing those wastes that are high volume and low hazard.

2. Separate Volume Criteria for Liquid and Non-Liquid Waste Streams

In the April 17 NPRM, the Agency solicited comment on the use of separate high volume cut-offs for liquid and solid mineral processing wastes. Specifically, EPA suggested 1.5 million metric tons per year as a volume cut-off for liquid wastes. The consideration of a higher cut-off for liquid wastes was predicated on the fact that industry routinely manages hazardous wastewater volumes in the millions of gallons per day per facility (i.e., well over one million metric tons per year), which is in marked contrast to non-liquid waste materials which are typically generated and managed in much smaller quantities.

Comments on a separate volume criterion for liquid wastes were varied. While some commenters stated that not only is a separate wastewater cutoff wholly appropriate, it should be much larger than 1.5 million metric tons, others contended that a separate criterion should not be employed at all.

Several commenters supporting a separate criterion for liquid wastes stated that EPA should employ a separate volume criterion for liquid wastes higher than the proposed 1.5 million metric tons per year. They asserted that the proposed 50,000 metric tons per year threshold cannot be justified for liquid wastes even at average hazardous waste treatment, storage, and disposal facilities (TSDs); there must be a separate liquid volume criterion, and it should be substantially larger than 1,500,000 metric tons per year. Specifically, EPA should establish the volume criterion by determining the volume representing the 99th percentile of volume handled at regulated hazardous waste TSDs.

These commenters claimed that such an approach is supported by three considerations: (1) It makes data comparisons with those segments of the Subtitle C regulated community most relevant to the current rulemaking, therefore the results will not be arbitrary; (2) it reflects the technical feasibility of complying with subtitle C regulations, and therefore is consistent with EPA's original concept of the special waste exemption; and (3) by limiting the overlap between the regulated and exempt communities to one percent, it allows for unusual outliers while still narrowing the bounds of the exemption as Congress and the Court in EDF II intended.

These commenters went on to state that a volume criterion for liquids substantially greater than the proposed 50,000 metric tons per year is supported by data from the 1985 Biennial Report and other EPA data. They stated that the average non-commercial surface impoundment TSD owner/operator managed at least 922,000 metric tons of hazardous waste in surface impoundments during 1986, while the average non-commercial underground injection well facility managed at least 403,199 metric tons of hazardous waste

during 1986. Data on Alabama, Kentucky, Louisiana, South Carolina, and West Virginia indicate that waste was generated in quantities over several hundred thousand metric tons, generally on-site at the average State TSD.

EPA agrees with the commenters that currently available data on waste management at subtitle C facilities support a higher high volume criterion for liquids than for solids. However, the data from the Biennial Report were not adequate for the type of analysis EPA believed appropriate. To address these comments and to develop a specific cut-off value, the Agency used data from EPA's National Survey of Hazardous Waste Treatment, Storage, Disposal, and Recycling Facilities (TSDR), which contains detailed information about volumes and specific types of wastes generated and managed at Subtitle C regulated facilities during calendar year 1986. These data allowed EPA to conduct a waste stream-level analysis of current management practices and hazardous waste volumes managed at facilities regulated under subtitle C of RCRA. Copies of the data used in the analysis are available in the docket.

As discussed more fully below, the Agency examined individual waste-code data for waste streams entering Subtitle C landfills to develop a revised criterion for solid/sludge materials, and for waste streams entering wastewater treatment processes, surface impoundments, and injection wells to develop a cut-off value for liquid waste streams. The final criterion values reflect the largest single waste code managed at the 95th percentile of the Subtitle C facilities employing these hazardous waste management techniques.

On the other side of the issue, several commenters stated that EPA's suggestion to use a separate high volume criterion for aqueous liquid wastes is inappropriate and that the Agency should apply the same high volume criterion to liquid and solid waste streams from mineral processing operations. They based this comment on the assertion that there is no justification for a separate aqueous waste criterion within RCRA, the Bevill Amendment, the Simpson Amendment, the legislative history, or the Agency's descriptions of the special waste concept. The commenters also contended that the disposal of aqueous wastes is already controlled for the most part under other programs such as the National Pollution Discharge Elimination System (NPDES) of the Clean Water Act and, therefore, a separate volume cut-off is not warranted. These commenters also remarked that a higher liquid waste cut-off would cause many facilities to lose exclusionary status and be regulated under Subtitle C for solids as well as for wastewater.

The legislative history clearly identifies amenability to management under subtitle C as a primary criterion for defining special wastes. The Agency believes that, because liquid and solid wastes have very different characteristics and are managed with very different processes, defining a separate high volume cut-off for liquids and solids is appropriate and necessary to fully capture the differences in manageability of different types of waste streams. The fact that some waste streams may lose their excluded status is not a determining factor in establishing either the basis for or the specific values of a high volume criterion.

A commenter claimed that EPA should not include liquid waste streams in the basis of comparison for developing the high volume threshold value for solid wastes. This commenter also asserted that to determine the threshold value, EPA must compare the volumes and treatability of mineral processing wastes with the volumes and treatability of those wastes which are actually regulated pursuant to subtitle C.

EPA agrees. In today's rulemaking, EPA has proposed separate high volume criterion values for solid and liquid wastes that were derived through separate examination of newly available TSDR survey data on solid and liquid wastes currently managed under subtitle C.

A commenter suggested that application of different criteria to solid and liquid waste streams is unwarranted, because wastewater is commingled with both suspended and dissolved solids; these are not differentiated in the handling process.

The Agency disagrees, because the dissolved and suspended solids are not considered separate Bevill solid wastes unless and until they have been precipitated or otherwise separated from the wastewater and are managed as a distinct waste stream. Candidate Bevill wastes that are in liquid form at the time of generation will be compared to the threshold for liquid wastes and those that are in solid form will be compared to the threshold for solid wastes. A solid/sludge residual from a high volume liquid waste will retain Bevill status if it is high volume, i.e., passes the high volume test for solid materials.

Another commenter asserted that EPA's assumption that wastewater is discharged from mining operations to waters under NPDES permits is incorrect in many cases. They maintained that the wastewater, which is commingled with solids, is evaporated. In addition, there is often no surface water in the vicinity of the mineral processing plants.

EPA has never made or articulated any assumptions about the final destination of wastewaters from mining and mineral processing operations and, in fact, asserts that the destination of treated wastewaters is irrelevant to the issue of determining Bevill status. A waste stream's Bevill status pertains only to how the waste is generated prior to disposal, not the manner in which it is finally disposed. The Agency is fully aware that wastewaters from mining and mineral processing operations are commonly evaporated or recycled after treatment.

One commenter asserted that EPA failed to understand that costs to manage wastewater escalate with impoundment size, thus regulation under subtitle C would burden facilities that manage wastewater in surface impoundments. For this reason, they maintained, EPA should use a less rigorous criterion than the 50,000 metric ton cutoff for liquid wastes.

While it may be true that the cost of waste management in surface impoundments increases in a non-linear fashion with the size of the impoundment, data from the TSDR survey indicate that facilities currently manage up to 44 million metric tons of a single hazardous waste stream in RCRA permitted surface impoundments, and that scores of facilities manage more than 50,000 metric tons of hazardous wastewater in surface impoundments annually. There are 55 facilities from the TSDR data set that managed over 1,000,000 metric tons of liquid hazardous waste in 1986. (A list of these facilities is contained in the docket to today's rule.) Many of these facilities use surface impoundments for one or more of their treatment processes. Across all facilities managing high volume hazardous waste, surface impoundments have been employed for virtually all treatment processes. These data demonstrate that management in surface impoundments under subtitle C regulations is feasible for volumes far greater than 50,000 metric tons.

Several comments specifically addressed EPA's suggestion of 1.5 million metric tons as a liquid waste cut-off. One commenter asserted that a 1.5 million metric ton threshold is arbitrary and inordinately high and suggested 250,000 metric tons as an alternative

value. Another commenter contended that EPA based its 1.5 million metric tons per year aqueous waste threshold on volumes of wastewater treated by other industries and that it is not certain that the mineral processing industry would produce the same volumes. Similarly, a commenter claimed that the 1.5 million metric ton threshold was based on unreasonable comparisons to wastewater streams that require little or no management. The proposed 1.5 million metric ton standard cannot be technically supported, they stated, because it was developed with reference to materials management practices that do not reflect the technical feasibility of applying Subtitle C controls to mineral processing wastes. Finally, one commenter contended that the total quantity of liquid waste streams routinely managed by industry is substantially lower than the proposed 1.5 million metric tons, therefore implementing this criterion would improperly exclude numerous aqueous waste streams from Bevill and the required study.

The Agency disagrees with the commenters on the importance of comparing mineral processing wastes only to identical wastes. The facilities in the TSDR data set represent a wide variety of industrial sectors and production processes, and generate a wide variety of waste streams. Waste streams examined in the analysis can in no way be construed to require "little or no management." Collectively, these facilities employ virtually all available waste management technologies, and commonly employ wastewater management techniques such as equalization, neutralization, metals precipitation, and coagulation/flocculation that are used to manage many, if not most, wastewater streams generated in the mineral processing industry. The docket document for today's rule referenced above also lists wastes generated and waste management technologies employed for 55 facilities managing high volume hazardous waste. Because these waste management technologies are generally available, virtually any wastewater management process employed by a facility in the TSDR data set could also be used by mineral processing facilities.

In its analysis of the TSDR data, however, EPA was sensitive to the concerns of these commenters about the similarity between mineral processing wastes and the subtitle C wastes being utilized to develop the high volume criterion. The similarity of waste streams examined, and therefore, the comparability of the two groups of facilities, is demonstrated by the fact that, of facilities in the data set generating volumes of waste larger than the high volume threshold, several are actually mineral processing facilities and many others are owned and operated by companies that also own and manage mineral processing facilities.

3. Degree of Aggregation of Waste Streams

In keeping with the initial approach delineated in the October 20, 1988 NPRM, EPA stated, in the April 17, 1989 notice, its intention to apply the high volume criterion to individual waste streams. The Agency employed only limited aggregation of very similar wastes such as copper slags and certain process wastewaters.

Commenters in general requested more aggregation of waste streams before application of the high volume cutoff. Several commenters objected to EPA's position that high volume aggregate wastes managed at a single facility are not high volume at all, but rather a collection of low volume single waste streams. They stated that this position undermines the intent of Congress and impermissibly reduces the number of mineral processing wastes subject to further study. They also contended that nothing in the language of the Bevill Amendment or EDF II suggests that this is appropriate.

Another commenter asserted that EPA has artificially segregated processing wastes into specific waste streams for purposes of determining which wastes will remain within the Bevill exclusion. This failure to aggregate is particularly onerous, they claimed, in light of the Agency's tentative decision regarding how to apply the mixture rule.

Several commenters claimed that no evidence exists to indicate that aggregating individual process streams increases potential hazard. They noted that the accepted industry practice is to combine all waste streams in aggregate for disposal. By failing to consider waste streams in the aggregate, they asserted, EPA ignores real world management practices.

Another commenter noted that subtitle C data are based on the combined volumes of all hazardous wastes managed at individual subtitle C facilities rather than the volumes of individual waste streams. If EPA uses these data, they contended, then it must aggregate waste streams at mineral processing facilities as well. An additional commenter maintained that EPA has failed to recognize that slag is a universal term descriptive of metallurgical processing wastes from many industry sectors. They claimed that, by specifically recognizing only wastes termed "slag," EPA has failed to afford continuing exclusion to other metallurgical process wastes that serve similar purposes.

These commenters suggested, instead, that EPA aggregate, for purposes of applying the high volume criterion, those waste streams from mineral processing which are similar in nature and subject to similar management practices. They maintained that both the legislative history and technical waste management feasibility considerations support this argument.

As it stated in the April 17 NPRM, the Agency largely disagrees with these commenters on the issue of the appropriate level of aggregation of waste streams. EPA believes, and the Court has agreed, that mineral processing wastes must meet the special waste criteria, namely high volume and low hazard, to be entitled to temporary exclusion from subtitle C requirements under the Bevill amendment. In order to complete the RCRA 8002(p) study requirements, EPA must define current and alternative management practices that could be employed to manage special mineral processing wastes. In practical terms, this requires that the Agency examine individual waste streams in order to determine whether current management practices are adequately protective of human health and the environment and whether individual Bevill wastes are amenable to Subtitle C controls. Moreover, because it is neither appropriate nor practical to apply the low hazard criteria to aggregated wastes, the Agency believes that it must address waste volumes as well as hazard on an individual waste stream basis.

Additionally, addressing mineral processing wastes on an individual waste stream basis is consistent with waste management regulations under the rest of the RCRA program. Under subtitle C, waste streams are listed individually and assigned waste codes. Each RCRA waste code represents an individual waste stream. Wastes in many industries, such as steel and petroleum production, are separated into several waste codes, each characterizing the individual process that generated them (see 40 CFR 261.31–33). These waste codes are treated individually under many of the subtitle C programs, such as the land disposal restrictions. In addition, requirements to determine whether a waste exhibits a hazardous characteristic contemplate an analysis on an "as generated" basis (see 40 CFR 262.11).

With respect to the commenter who asserted that EPA should aggregate mineral processing waste data because the data used to establish the volume criterion were aggregated, the subtitle C data used in support of today's rulemaking is sufficiently detailed to allow EPA to conduct a waste stream-level analysis of subtitle C waste management. Thus, there is no inconsistency in level of aggregation between the data used to develop the revised high volume criterion and the waste streams to which it has been and will be applied.

The Agency also received comments from representatives of individual mineral processing sectors about specific waste streams.

One commenter claimed that EPA's proposal to segregate waste streams into individual segments within a process is artificial and impractical. They maintained that this segregation would result in costly changes without significant environmental benefit. Because NPDES regulations require extensive recycling efforts and large holding ponds, it would be impractical to segregate waste streams. They asserted that the regulatory controls required by the proposed rule and by NPDES regulations would result in substantial conflict.

Another commenter stated that recirculated process water must be aggregated with phosphogypsum in making high volume determinations. Because water management at phosphate fertilizer plants uses an integrated system, they claimed, it is illogical and impractical not to aggregate phosphate process water for purposes of regulation. In addition, the waters recirculated throughout the phosphate rock processing facility are chemically similar at virtually every point.

The Agency finds these arguments unpersuasive. As discussed above and in the April 17 NPRM, it is most appropriate to consider wastes on an individual basis for the purpose of determining Bevill status. The fact that wastes are currently commingled at some point in the production irrelevant to this determination, as are site-specific permit requirements. Sector-specific waste management practices applied to Bevill mineral processing wastes will be evaluated for the Report to Congress.

A third commenter asserted that Congress considered phosphate processing wastes in the aggregate when it identified them as subject to the Bevill Amendment in the 1978 and 1979 documents, thus the Bevill Amendment requires aggregation of phosphate processing wastes. They maintained that management of aggregate waste streams is essential to comply with environmental requirements and has not been undertaken to take advantage of the Bevill Amendment. They further claimed that, in its past studies, EPA also has recognized that phosphate process water must be evaluated on an aggregate basis. They concluded that considering phosphate processing streams on an individual basis will provide no meaningful protection of human health and the environment.

The Agency rejects the argument that one sector should receive special treatment for historical reasons. EPA believes that all commodity sectors and facilities should receive equal treatment in the determination of Bevill status. Moreover, as discussed at length in the October and April proposals, EPA believes that in a general sense, aggregation is inappropriate for considering both the volume of and hazard posed by mineral processing wastes. The Agency discerns nothing unique about phosphate rock processing that would justify differential treatment.

Other commenters asserted that the legislative history of the Bevill Amendment directs EPA to study all wastes from the mineral processing industry, including all metallurgical processing wastes whose fundamental purposes are the same. For this reason, they maintained, primary zinc iron residues should be aggregated and treated similarly to metallurgical residues from other nonferrous metal industry sectors. They appealed to EPA to consider that wastes from the various zinc processing operations may be identified by different names depending on whether the facility uses pyrometallurgical or hydrometallurgical techniques, and if hydrometallurgical, by the specific leaching process employed. They maintained that zinc processing residues which are essentially identical, including zinc lean slag, goethite, jarosite, hematite, and simply "iron residue," should be aggregated.

While the Agency understands the argument made by the commenter that the wastes mentioned are all impurities from the production of zinc, EPA has determined that the wastes arise from fundamentally different production processes (e.g., pyrometallurgical versus hydrometallurgical). It has, therefore, concluded that the wastes are not sufficiently similar to warrant aggregation. In addition, as discussed above, the Agency disagrees that the Bevill Amendment requires EPA to study all mineral processing wastes for the Report to Congress regardless of volume or hazard.

A commenter stated that sludge from beryllium ore leaching should remain within the Bevill exclusion. Prior to adding the sludge leaching step to enhance recovery of beryllium, materials now discarded as part of the low volume sludge leaching stream were discarded with the high volume barren filtrate stream. For this reason, they concluded, separating these waste streams for the purpose of determining high volume is inappropriate.

EPA disagrees with this argument. If the waste streams are separable, they are evaluated individually with respect to volume and hazard. The question of which other stream(s) might be comanaged with a given stream at any point in time is entirely irrelevant to these determinations.

4. Alternative Components/Application of the High Volume Criterion

In the April 17 NPRM, EPA proposed to apply the high volume criterion as the average annual facility generation rate across all facilities generating the waste streams in question.

Several commenters stated that the high volume criterion should allow exemptions for specific facilities generating over 50,000 metric tons of waste per year even if the industry average is less than the 50,000 metric ton threshold. One commenter contended that the Agency should recognize that meeting the 50,000 metric ton threshold would qualify a waste for study, not necessarily grant exclusion from subtitle C regulation. They also believed that using an average generation rate across a sector inaccurately represents the feasibility of real world management practices. The use of sector-wide averaging, they claimed, only serves to reduce EPA's burden and does not address the waste management problems faced by industry.

Another commenter asserted that EPA's rationale for changing the high volume criterion is illogical. They claimed that EPA's view that it is discriminatory to allow a facility which generates large volumes of waste to qualify for an exclusion is counter to the entire basis for the Bevill Amendment. The commenters also argued that EPA should not subject a facility to inappropriate requirements simply because some similar but smaller operations could not meet the Bevill criterion and could comply with subtitle C. They maintained that it would be much more discriminatory to impose the full panoply of subtitle C controls on a facility which cannot economically or technically comply with them. They further maintained that even the

flexibility allowed for large volume generators under RCRA 3004(x) would be lost under EPA's proposal.

The Agency finds this argument unpersuasive and, therefore, maintains that a sector-wide average facility generation rate is the most equitable way to define high volume mineral processing wastes. As stated in the April 17 NPRM, allowing any individual facility to qualify for the exclusion while requiring other, smaller facilities in the same sector to comply with subtitle C regulations would be unfair to the smaller facilities. Alternatively, excluding a waste stream on a sector-wide basis because of the large waste volumes generated by one facility might result in the retention within the exclusion of wastes that clearly are amenable to subtitle C controls at most facilities. As stated in the April NPRM, the Agency believes that the sector-wide average per facility generation rate represents the best alternative between these two extremes.

In the October 20, 1988 NPRM, the Agency solicited comment on the use of a second test for the high volume criterion; this test was based on industry sector-wide waste stream generation. This test was dropped for the April 17 NPRM.

Several commenters contended that EPA should retain the industry-wide criterion because it is a useful alternative for volume determinations. One commenter maintained that the Court of Appeals ordered EPA to draft criteria for Bevill wastes consistent with the Agency's historic definition of "special waste" and that the industry-wide criterion is an integral aspect of the Bevill mandate.

The Agency maintains that average waste generation per facility is a better indicator of the amenability of a waste to management under subtitle C than industry-wide waste generation. As noted in the April 17 NPRM, this belief is based largely on the fact that most large volume mineral processing wastes are managed on-site. EPA notes that the U.S. Bureau of Mines supports EPA's position on this issue. EPA also notes that the decision to eliminate this criterion affected only one waste stream of all those proposed in October or April or otherwise nominated (lime kiln dust). Lime kiln dust is generated by a calcining operation and, as discussed further below, is a beneficiation waste. Therefore, elimination of the criterion has no practical effect.

EPA also received comments on the idea of using a ratio of waste volume generated to quantity of final product as an additional or alternative volume criterion. This was an idea on which EPA had solicited comments in the October 20 NPRM but which it decided not to employ in support of the revised high volume criterion published in the April 17 NPRM. Many commenters advocated using such a ratio instead of the average waste generation rate which EPA has used as the sole high volume criterion since the April 17 NPRM.

The Agency wishes to make clear the fact that it has never considered using a waste to product ratio as either a sole or alternative high volume criterion. At one time, EPA considered using a ratio in combination with the average generation rate as a high volume criterion. Following further analysis, EPA concluded that no added analytic power was provided by the ratio, because it has no relevance to the feasibility of managing a waste stream under subtitle C. For a full explanation of EPA's reasoning, refer to the April 17 NPRM (54 FR 15329). EPA has encountered no compelling arguments in any of the numerous comments on the October or April proposals that would support a change in the Agency's position with respect to the ratio concept.

Other comments addressed units of measurement. One commenter maintained that EPA should adjust its high volume criterion to take into account a waste's density. "High volume," they asserted, refers to the space a waste occupies, not its weight; the space a weight occupies is more relevant than its weight in determining its amenability to Subtitle C management.

EPA disagrees with this assertion and continues to believe that mass is the most relevant and workable indicator of the manageability of a waste stream. Because the physical space consumed by a material can vary over time based on the way in which it is handled (e.g., even "solid" materials can be compacted or undergo particle size reduction), EPA believes that mass is a more stable, and thus, more appropriate basis on which to develop and apply the high volume criterion. Additionally, mass is the most practical measure for evaluating waste quantities; virtually all other data on hazardous waste collected by EPA is measured in metric tons.

5. Type of Waste Used as the Basis of Comparison

In the April 17 NPRM, EPA based the high volume cut-off of 50,000 metric tons on volumes of waste generated and managed at Subtitle C regulated facilities. Congress intended the Bevill exclusion to cover only those waste streams that are generated in such quantities as to be potentially unmanageable under subtitle C regulations. For this reason, the Agency feels strongly that comparison of mineral processing waste volumes with those of wastes managed under Subtitle C controls for the purpose of determining Bevill status is wholly appropriate and, in fact, the only appropriate analytical basis for developing the high volume criterion.

One commenter representing mineral processing industry interests maintained that the high volume criterion should be set at a level that reflects the proven technical feasibility of onsite disposal of similar wastes subject to Subtitle C regulation and that the threshold value should be based solely upon disaggregated waste streams.

The analysis undertaken by EPA in support of today's rulemaking reflects both of these concerns.

Several commenters objected to EPA's refusal to use the lowest of extraction and beneficiation waste generation rates to establish the high volume threshold, especially in light of the Agency's recognition that some extraction and beneficiation wastes are generated in volumes less than 50,000 metric tons per year. Another commenter maintained that refusal to use the lowest generation rate of the candidate Bevill wastes seemed in direct contrast with EPA's statement in the April NPRM that the generation rates of the six recently listed smelting wastes should serve as a lower bound for the high volume criterion because the six wastes are generally accepted as low volume wastes. An additional commenter asserted that EPA's selection of 50,000 metric tons per year as the high volume criterion based on comparison to generation rates of the extraction and beneficiation industry is arbitrary, without any factual basis, and improperly removes most mineral processing wastes from the study required in RCRA § 8002.

These comments represent a distortion of EPA's reasoning in the April 17 NPRM. At that time, the Agency asserted that wastes from extraction and beneficiation were typically generated in volumes orders of magnitude greater than most mineral processing wastes and therefore would be inappropriate to use as a lower bound for the volume cutoff. Subsequently, the Agency did not base the volume cutoff solely on generation rates of extraction and beneficiation wastes but used this information as a "reality check" for the volume threshold selected. The fact that only a small number of extraction and beneficiation wastes are below the cut-off does not

invalidate the concept, and in fact suggests that EPA's volume cut-off value is an appropriate measure of special waste status under real-world conditions.

One Commenter asserted that the fact that EPA received data on management of hazardous wastes biennially refutes the Agency's contention that it had to compare mineral processing wastes with aggregated subtitle C wastes because of insufficient information. They claimed that the 1985 survey (National Report of Hazardous Waste Generators and Transportation, Storage, and Disposal Facilities Regulated under RCRA) showed an average generation rate per waste of 12,467 tons per facility and suggested that this figure would be more appropriate as a basis for comparison.

The Agency agrees that a waste-by-waste evaluation is the best method for developing the high volume criterion, and has been able to use even more recent waste code-level data than that suggested by the commenter to develop the final criteria established by today's rule. The Agency disagrees, however, that the average generation rate is the appropriate value to use as the volume cutoff. As noted in the April 17 NPRM, the high volume criterion should exclude from subtitle C regulation only potentially unmanageable waste volumes, not average waste volumes.

EPA received several comments on the use of commercial subtitle C facilities as the basis of comparison. While several commenters stated that this is an inappropriate basis of comparison, other commenters supported the inclusion of commercial facilities in any data base addressing subtitle C waste management to be used as a basis of comparison.

Commenters favoring the use of commercial facilities objected to EPA's rationale that inclusion of data from commercial facilities is inappropriate because the incentives and costs/benefits from waste management differ for commercial facilities. They asserted that EPA's hazardous waste regulations apply to both commercial and non-commercial facilities; thus, the same incentives for compliance with regulations to avoid fines and/or imprisonment exist for all hazardous waste handlers. They also asserted that EPA has not demonstrated a fundamental difference in incentives for managing large volumes between commercial and non-commercial facilities. They maintained that, because commercial facilities must compete for clients, they do not have unlimited funds to comply with regulations. Finally, the commenters asserted that any difference in incentives does not address the fundamental concern of the volume criterion which is the technical and institutional feasibility of complying with subtitle C requirements. Infeasibility, they added, should not be based upon a cost/benefit analysis which has no foundation in the statute or in the special wastes concept.

These commenters also asserted that data indicate that, in States containing a large number of TSDs, most TSDs are not commercial facilities. They added that TSDs that only manage waste on-site, manage the largest quantity of hazardous waste, indicating that the average quantity of hazardous waste managed per TSD is greater for non-commercial facilities than for commercial facilities. They concluded that these data disprove the theory that commercial facilities should be better able to manage substantial quantities of hazardous waste than on-site TSDs.

While EPA finds many of these arguments unpersuasive, particularly those addressing the economic incentives to operate commercial versus non-commercial subtitle C waste management facilities, the Agency does agree that technical feasibility is the fundamental issue addressed by the volume criterion, and has, accordingly, included commercial subtitle C facilities in the data base used to develop the revised high volume criterion described below.

6. Actual Threshold Value

In the April 17 NPRM, the Agency proposed 50,000 metric tons as the high volume cutoff. This value was to be applied to the average generation rate of each candidate waste stream. Comments on the actual value of the high volume cutoff were mixed, with some commenters arguing that the value was too low and others that it was too high.

Commenters arguing that the proposed value was too low presented evidence from several sources demonstrating that some regulated TSDs manage hazardous waste in volumes greater than 50,000 metric tons. They presented data from the 1985 National Biennial Report stating that in two of the ten EPA Regions, the average quantity of hazardous waste managed at each TSD substantially exceeded 50,000 metric tons per year. The commenters' analysis of these data also indicated that the top 50 and 100 generators of hazardous waste handle waste in quantities 78 times greater and 42 times greater, respectively, than the threshold quantity proposed by EPA.

The commenters also noted that of the nine listed hazardous waste streams EPA used for comparison to mineral processing streams in the October proposal, four are generated in quantities larger than 50,000 metric tons per year. Additional data indicated that two-thirds of the nine largest waste streams currently regulated as hazardous are generated or managed in quantities exceeding 50,000 metric tons per year. Additionally, they claimed that EPA's proposed threshold quantity would exempt the average hazardous waste generator in at least three States.

Finally, the commenters maintained that the fact that 10 percent of the regulated community currently manages waste volumes larger than 50,000 metric tons indicates that the cut-off is too low. They further maintained that a 10 percent overlap between the regulated and unregulated communities is a broad overlap and does not reflect the Agency's assertion that the Bevill exclusion need not be broad.

All of these data, they asserted, indicate that the threshold proposed in the April NPRM is not indicative of technical or institutional infeasibility. They claimed that it could hardly be termed technically infeasible to manage 50,000 metric tons per year of hazardous waste if the average TSD manages quantities approaching or exceeding 50,000 metric tons per year in those parts of the country where large volumes of hazardous waste are managed.

While the Agency agrees with the basic premise of the commenters that available data support a higher high volume criterion (at least for liquid wastes), EPA disagrees with the commenters' particular use of data to support their claims. Specifically, the commenters selectively chose data from certain facilities, states, and regions to support their claims, casting doubt on the validity of their conclusions. EPA is not convinced that these selected data accurately portray current, representative hazardous waste management practices, and believes that presenting data from several selected states and regions in support of an argument is not sufficient evidence on which to base national policy. Additionally, the commenters used data that are aggregated across waste streams and, therefore, are not directly comparable to the analysis EPA has conducted. Finally, the Agency does not believe that a 10 percent overlap between Bevill wastes and the subtitle C universe is necessarily unreasonable.

Commenters asserting that the proposed value for the volume criterion was too high based their assertion primarily on three arguments: EPA arbitrarily selected 50,000 metric tons,

there should be at least a ten percent overlap between the Bevill exempt wastes and the subtitle C regulated community, and 50,000 metric tons is beyond the level of technical feasibility for wastes in solid form.

Several commenters stated that the Agency arbitrarily selected 50,000 metric tons per facility per year as a volume threshold and provided no justification for the selection of that value. A commenter also maintained that EPA should not use this very crude threshold value as a screen to perform a technical feasibility analysis for which it does not have sufficient information and support.

The volume criterion proposed in the April 17 NPRM was based on the best data EPA had available at the time and was therefore not arbitrary. However, since that time, better data have become available and have been used by the Agency in support of the volume criterion established by today's final rule, in part, to respond to these criticisms.

A commenter stated that there should be at least a ten percent overlap between the universe of Bevill processing wastes and subtitle C wastes and that the 50,000 metric ton threshold does not provide the necessary 10 percent overlap. EPA stated that the number of facilities that manage more than 50,000 mt/yr is "well under ten percent of the total," but the Agency failed to place into the administrative record data to support this claim. The commenter contended that the Agency, in failing to respond to comments raised on this issue in the October NPRM, has effectively denied the commenter an opportunity to comment fully on the proposed threshold.

The Agency does not accept the claim that data concerning subtitle C waste management and the development of the high volume criteria are not publicly available. The basis for development of the threshold is described in documents that may be found in the docket for the 10/20/88 NPRM. The issue is moot, however, because the Agency is today modifying the volume criterion based upon updated subtitle C waste management data, as described below.

Regarding the appropriateness of a ten percent overlap between the subtitle C wastes and the Bevill wastes, in the April 17 NPRM, EPA allowed a 10 percent overlap between subtitle C wastes and Bevill wastes to account for problems with the data used in the analysis. The Agency never intended to make the 10 percent overlap a rule for determining the high volume cutoff. The data used in the analysis in support of today's rulemaking are much stronger than those used before and thus the Agency believes a five percent overlap is more appropriate and is supported by these more recent data.

One commenter maintained that, while the threshold value might be used for aqueous mineral processing wastes, technical feasibility requires a much lower threshold for solid mineral processing waste.

The Agency disagrees with this position. The TSDR data indicate that at least five facilities managing hazardous waste in solid form routinely manage 45,000 metric tons per year or more of a single waste stream; this represents roughly five percent of the facilities managing hazardous wastes in on-site subtitle C landfills.

Several commenters arguing that the proposed value is too high suggested lower values ranging from 10,000 metric tons per year to 30,000 metric tons per year. One commenter maintained that EPA should establish a facility average of no greater than 30,000 metric tons per year as this would only be slightly lower than three "acknowledged" Bevill wastes—zinc extraction wastes, utility FGD sludge, and utility bottom ash. Several other commenters stated that the rate should be lowered to a 10,000 metric tons per year facility average as this threshold indicates "high volume" compared to facilities producing wastes that are not classified as special wastes.

As EPA stated above and in the April 17 NPRM, the existence of a few Bevill waste streams with generation rates below the high volume cut-off does not invalidate the adopted threshold. The Agency is not obligated to select a high volume cut-off based on the three "acknowledged" Bevill wastes. As pointed out by a commenter on the April notice, volumes of utility wastes (and by extension, other Bevill wastes) may not be directly comparable to wastes from mineral processing. With respect to the suggestion of a 10,000 metric ton cutoff, EPA has not found support for such a low threshold in any relevant data available to the Agency when technical feasibility is considered as the basis for the determination.

Two commenters stated that EPA should develop a low volume, low hazard category. One commenter noted that many small processing operations are effectively managing wastes and may be significantly affected economically if subjected to subtitle C regulations. Another commenter asserted that there is no need to regulate aggregate or individual low volume/low hazard wastes under subtitle C; regulation under subtitle D would be more appropriate.

EPA disagrees. Congress clearly intended to exempt only high volume, low hazard wastes under the Bevill Amendment. Those wastes which are not high volume may feasibly be managed under Subtitle C or Subtitle D as appropriate. Accordingly, EPA will not establish a separate regulatory category for low volume, low hazard mineral processing wastes.

One commenter claimed that EPA's statements regarding the high volume threshold are contradictory. They noted that EPA made the following statement in the November 1979 Draft Background Document: "due to the obvious interdependence of these criteria and the number of factors involved in assessing any particular criterion, *quantification of the items is impossible.*" (Emphasis in comments only.) It follows, the commenter asserted, that the Agency's current approach in which a given waste stream generated at much less than 50,000 mt/yr, and which still poses manageability problems could be withdrawn from the Bevill exclusion based only on a quantified volume criterion, is absurd.

In 1979, EPA had little experience with the RCRA program, a limited understanding of the characteristics of the regulated community, and incomplete data on hazardous wastes and waste management. Since that time, EPA has dramatically improved each of these initial shortcomings and, thus, its ability to quantify and articulate the special waste criteria.

Finally, one commenter suggested that lowering the volume threshold would not pose any threat to the environment because no matter what the outcome of the section 8002(p) studies, the waste must be regulated either under subtitle C, the provisions of section 3004(x), or subtitle D.

While EPA believes that there is some merit to this argument, as discussed more fully below, the legislative history and direction from the Court dictate that only special wastes are eligible for exemption under Bevill and examination in the 8002 studies.

7. Application of the Cutoff Value to Waste Streams

Several commenters objected to the process of formulating national average volume determinations based only upon data submitted for one facility, arguing that it is arbitrary and capricious. These commenters also stated that EPA should verify all self-reported data submitted by the mineral processing companies because of the incentive for firms to inflate their waste generation rates and thus remain exempt. They asserted that EPA routinely discovers inaccurate self-reported data in other instances, even

when those data were submitted under oath.

EPA did not have the time or resources to measure candidate waste streams at affected facilities. In addition, EPA had a very limited amount of time in which to collect the additional data needed to fully determine the Bevill status of each candidate waste stream. In order to propose the regulatory status of several waste streams and provide appropriate opportunity for notice and public comment in accordance with EPA's Court-imposed schedule, the Agency had to rely on self-reported volume data. The self-reported data will be verified by examination of new data from the National Survey of Solid Wastes from Mineral Processing Facilities. Waste streams that the survey data indicate do not meet the high volume criterion will be proposed for removal in the September 15, 1989 proposed rule addressing the status of wastes that have been conditionally retained within the exclusion. Facility operators completing the mineral processing survey are subject to section 3007 penalties for submission of false data.

Several commenters objected to EPA's proposed use of the highest average generation rate over a five year period (1983–1988) as the value for comparison with the volume criterion. Several commenters expressed concern that this would ignore the possibility that waste generation across the years has been reduced due to improved waste management processes. They felt that EPA should not ignore substantial waste reduction trends, when the existence of those trends could remove the eligibility of the waste from the Bevill exclusion. These commenters suggested, instead, that EPA base volume determinations upon the lower of either the average generation quantity from 1982–87 or the average generation quantity for calendar year 1987. This method, they asserted, would allow EPA to take into account both waste reduction trends and variations in market conditions.

Congress intended to exclude only those wastes that are generated in volumes that are potentially unmanageable under Subtitle C. The Agency believes that the highest average generation rate for any year between 1983 and 1988 is a better indicator of potential difficulty in managing a waste under Subtitle C than the method proposed by the commenter because it allows for changes in waste generation rates caused by fluctuations in commodity markets. The method suggested by the commenter is arbitrary and would punish sectors that might have had low waste generation rates in any single year during the most recent five year time period due to poor economic conditions rather than waste minimization efforts as implied by the commenter.

Between the October 20, 1988 NPRM and the April 17, 1989 NPRM, EPA shifted the five year period for which EPA will consider waste generation rates from 1982–1987 to 1983–1988 so that it could base its decision on the most recently available data. Several commenters expressed concern that the shift in the "window" will allow new waste streams to become eligible for inclusion into the Bevill exclusion. They maintained that the Agency should not allow further opportunities for waste generators to provide new data.

The Agency maintains that, in the interest of treating all affected firms equally, any mineral processing wastes that meet the definition of a special waste should be included in the Report to Congress, even if the key information about that waste stream came from 1988.

The Agency rejects the argument of one commenter that EPA should use production data from all facilities producing chrome processing wastes in any year during the period 1983 through 1988, irrespective of whether any such facility is still operating. Because the Agency does not impose requirements retroactively, it would be inappropriate to use past data from facilities that are no longer in operation to develop regulations. Therefore, exclusion from Subtitle C regulation under the Bevill Amendment will be based only on waste volumes generated at active facilities. For additional detail on the EPA's policy not to impose regulatory requirements retroactively, see section II of this preamble.

D. The Definition of Mineral Processing

In the preamble to the October 20, 1988 proposed rule and again in revised form in the April 17, 1989 NPRM, EPA provided criteria for defining and identifying wastes from ore and mineral processing operations. These criteria require that all wastes qualifying for exclusion under the Bevill Amendment originate from a mineral processing operation as defined by the following elements:

(1) Excluded Bevill wastes must be solid wastes as defined by EPA.

(2) Excluded solid wastes must be uniquely associated with mineral industry operations.

(3) Excluded solid wastes must originate from mineral processing operations that possess all of the following attributes:

a. Follow beneficiation of an ore or mineral (if applicable);

b. Serve to remove the desired product from an ore or mineral, or from a beneficiated ore or mineral, or enhance the characteristics of ores or minerals, or beneficiated ores or minerals;

c. Use mineral-value feedstocks that are comprised of less than 50 percent scrap materials;

d. Produce either a final mineral product or an intermediate to the final product; *and*

e. Do not combine the product with another material that is not an ore or mineral, or beneficiated ore or mineral (e.g., alloying), do not involve fabrication or other manufacturing activities, and do not involve further processing of a marketable product of mineral processing.

(4) Residuals from treatment of excluded mineral processing wastes must be historically or presently generated and must meet the high volume and low hazard criteria in order to retain excluded status.

1. Excluded Bevill Wastes Must be Solid Wastes as Defined by EPA

EPA proposed in the October NPRM and confirmed in the April NPRM that it will use the definition of solid waste codified at 40 CFR 261.2 to identify materials that are eligible for consideration as special wastes, stating that nothing in the regulatory history of the Bevill Amendment indicates that the Agency is expected to or should apply a definition of solid waste that is different than that applied throughout the RCRA program.

EPA received a number of comments relating to the issue of when and if the materials under consideration in this rulemaking can be RCRA "solid wastes" when they are destined for recycling. These comments were of three types. Most dealt broadly with the overall question of the Agency's authority to classify materials destined for recycling as solid wastes. A few comments were more specific, mentioning types of materials involved. Finally, another group of comments dealt in detail with types of materials (principally iron and steel slag) that are recycled.

Before responding to these comments, the Agency first notes that this issue is without direct effect on persons managing materials that EPA has determined remain Bevill wastes because they satisfy the high volume/low hazard criteria. EPA will consider such materials further as part of the section 8002 study, but there are no regulatory consequences on persons

managing such materials. (EPA notes further that it is directed to study the "utiliz[ation]" of mining wastes, indicating some expectation that examination of recycling practices would be part of the Bevill study. RCRA section 8002(p).)

There may be regulatory consequences for materials that the Agency determines were improperly classified under previous interpretations of the Bevill amendment. Such materials are analogous to other wastes newly brought into the subtitle C framework, and thus become subject to all of the subtitle C regulations. If such materials are "solid wastes", then they also can be hazardous wastes subject to applicable subtitle C standards. Comments on this point failed to identify specific types of materials affected, however, and so failed to provide any indication of whether there are any elements of discard associated with the recycling activities (such as land based storage, prolonged retention times, management in unrelated facilities, presence of high concentrations of unrecyclable toxic constituents not found in virgin materials that would be processed in place of the secondary materials, and other similar elements). It is EPA's belief, based on prior rulemakings dealing with recycling, that most of the materials newly classified as non-Bevill materials would not be solid wastes when recycled in metal recovery operations because they would be unlisted sludges and byproducts being reclaimed. Such materials are not classified as solid wastes (§ 261.2 (c)(3)), unless they are being speculatively accumulated. Thus, today's rule would not have any practical impact on such materials.

EPA's responses to the commenters' specific points are set out below.

a. With respect to the Agency's authority to regulate types of recycling as hazardous waste management, EPA has indicated many times its views on the extent of its authority. See particularly 50 FR 638 (Jan. 4, 1985) and 53 FR 519 (Jan. 8, 1988). EPA does not subscribe to the view that only things that are thrown away are solid wastes. Such a reading nullifies explicit statutory authorities (see RCRA sections 3004(l), 3004(q), and 3014), and fails to take into account that many recycling practices are characterized by elements of discarding which afford jurisdiction under RCRA Subtitle C. The Agency also does not believe that anything in *American Mining Congress* v. *EPA*, 824 F. 2d 1177 (D.C. Cir. 1987) is to the contrary. Certainly, nothing in the opinion indicates that the Court intended to make legal such practices as the road oiling at Times Beach, Missouri, or unrestricted burning of hazardous secondary materials in boilers and industrial furnaces. Yet this is the direct consequence of the commenters' position. However, as noted above, this issue appears to be only an academic one in this rulemaking, given the lack of practical consequences.

EPA also notes that, contrary to the view of several of the commenters, it is not finalizing the January 8, 1988 definition of solid waste in this proceeding. EPA is indicating that a material need not be thrown away to be a solid waste, and that recycling activities can be characterized by elements of discarding. This has been EPA's articulated position since the first major RCRA subtitle rules were issued on May 19, 1980. 45 FR 33090–94. Had commenters provided more detailed information, EPA could provide more guidance as to the status of particular materials. Given the absence of such comment (with a few exceptions discussed below), EPA can only articulate broader principles here.

b. Some commenters were slightly more specific about the types of materials being recycled that should not be considered to be RCRA solid wastes. One stated that "intermediates and inprocess materials" such as copper matte, blister copper, lead bullion, lead drosses, and various "secondary materials" such as flue dust and wastewater treatment sludges, should not be considered to be solid wastes when they are processed to recover metal values. The specific type of recycling referred to in this comment is reclamation. Existing regulations (see 40 CFR 261.2(c)(3)) state that sludges and by-products such as those discussed in the comment, are solid wastes only if they meet one of the hazardous waste listing descriptions found at 40 CFR 261.1 or 261.32. When wastes from specific or non-specific sources are listed as hazardous, i.e., are included in 40 CFR 261.31 or 261.32, existing waste management practices, including recycling, are considered in establishing the precise wording of the listing. Today's rulemaking would not, however, add new listings to either 40 CFR 261.31 or 261.32, and would therefore not affect whether materials discussed in the comment, assuming that they are being legitimately recycled, would meet the definition of a solid waste. EPA has previously indicated that surface impoundments used for wastewater treatment are not part of recycling operations. *See*, e.g., 53 FR 35414–5 (lead impoundment solids). Such units are generally intended for purposes of waste treatment and are thus normally subject to regulation as waste management units.

c. A number of commenters stated that iron blast furnace slag and basic oxygen furnace slag should not be considered to be solid wastes when they are utilized as aggregate substitutes. EPA notes first that it views these materials as remaining within the scope of the Bevill exemption, so there is no immediate regulatory consequence of calling these materials solid wastes. However, EPA is not making a final determination on the issue of whether these materials are solid wastes. EPA will study this issue further as part of the section 8002 study. Commenters indicated that even though these slags are recycled in ways that involve application to the land (whether directly or in the form of slag-derived products like cement and concrete), the slags have been used for decades interchangeably with high-grade natural aggregates, they meet all relevant commercial specifications for agqregate, there is a known and profitable market for all of the slag generated by industry (indeed, some blast furnace slag is imported to meet domestic demand), and the slag appears impervious to leaching toxic metals under the EP toxicity test. EPA has requested further information comparing these blast furnace slags to virgin aggregates to ascertain whether unrecyclable toxics might possibly be being disposed by the recycling practice. The Agency is impressed by the public comments, however, and may ultimately determine that these slags are not solid wastes. Certainly, based on the public comments, these slags appear now to be a long-standing part of the commercial aggregate market, and are commonly accepted as meeting all relevant commercial specifications.

A second commenter indicated that recirculating process water is not a waste. Although the commenter did not describe precise details of operation, the Agency agrees that normally continued use of process water in an industrial process does not involve wastewater but rather continued use of process water. This answer assumes, however, that wastewater is not removed from the system to be reclaimed before it can be reutilized. In the event that this process water is managed outside of a closed-loop recycling system, such as in a surface impoundment for cooling or settling, then the impoundment would likely be considered a waste

management unit and subject to EPA's jurisdiction, as discussed above.

2. Excluded Solid Wastes Must Be Uniquely Associated With Mineral Industry Operations

To be excluded under the Bevill Amendment, solid wastes must be uniquely associated with the mineral processing industry. EPA received no significant comments either in support of or in opposition to this criterion, and will continue to require that wastes meet this criterion.

3. Excluded Solid Wastes Must Originate From Mineral Processing Operations as Defined by Five Specific Criteria

In general, commenters believed that the attributes used in the proposed rule to define mineral processing were acceptable. As discussed in the Appeals Court decision that precipitated the current rulemaking, EPA is obliged to consider whether candidate wastes are high volume and low hazard in making Bevill mineral processing waste exclusion decisions. While these factors are, and have always been, the key elements in identifying special wastes, the distinction between mineral processing and nonmineral processing wastes is important because Congress intended to put within the regulatory exclusion only wastes generated as a consequence of exploiting a natural resource, not wastes from other industrial activities, even if both occur at the same facility.

a. *Operation must follow beneficiation of an ore or mineral (if applicable). Processes that use heat to change the chemical composition of ores and minerals, or beneficiated ores or minerals, are considered mineral processing operations. Heap, dump, and in-situ leaching, as well as tank and vat leaching, are specifically defined as beneficiation operations.* Commenters addressing the October, 1988 NPRM's beneficiation definition argued that it did not adequately delineate the boundary between beneficiation and processing. The U.S. Bureau of Mines (BOM) commented extensively, claiming that the October definition did not adequately express EPA's intent that leaching be considered a beneficiation operation. Therefore, in the April, 1989 NPRM, EPA modified the proposed rule (1) to define heap, dump, *in-situ*, tank, and vat leaching as beneficiation, unless they follow one or more processing operations in the production sequence, in which case they are considered processing operations; and (2) to clarify that processing operations use chemical reactions, electrolytic techniques, or pyrometallurgical/thermal processes (e.g., roasting, smelting, calcining) to concentrate or enhance the characteristics of valuable constituents and, thus, differ from beneficiation operations (some beneficiation operations employ heat, but only to remove water).

Industry commenters addressing the April NPRM criticized EPA for, in effect, narrowing the definition of beneficiation, claiming that the Agency focused too strongly on chemical and physical distinctions when it clarified the beneficiation definition. By classifying steps such as roasting as mineral processing and steps involving drying as beneficiation, the Agency's definition, they claimed, would result in some previously excluded beneficiation wastes now being considered "processing" wastes potentially subject to Subtitle C regulation. They complained that EPA has offered no explanation for why it has apparently decided to eschew previous definitions of beneficiation. They contended that the shift could cause precious metals industries in the United States to suffer drastic and unwarranted economic impacts. Commenters insisted that the Agency address the problems caused by its "clarification" of beneficiation and processing and suggested the alternatives below.

i. *Use the Report to Congress Definition of Beneficiation.* Many commenters recommended that the Agency abandon the restrictive list of beneficiation operations in the NPRM and adopt the definition of beneficiation found in the 1985 Report to Congress. These commenters maintained that this definition historically has been accepted by the mining industry, adopted by EPA, subjected to Congressional scrutiny, has withstood litigation in EDF I, and can be traced back to an even earlier definition found in the EPA effluent limitations guidelines development document on ore mining and dressing. The commenters claimed that any attempt by EPA to contradict the Report to Congress and its Regulatory Determination is barred both as a matter of administrative law and by Congress' decision that beneficiation wastes may not be regulated as hazardous without an additional Report to Congress and Regulatory Determination.

ii. *Eliminate or Modify the Heat Criterion.* Many commenters suggested that EPA eliminate or modify the heat criterion added as a part of the clarification in the April, 1989 NPRM. Commenters stated that the Agency's addition of the "heating" of ore criterion redraws the line between beneficiation and processing without adequate analysis of the impact of such revision, or support in the Bevill Amendment or the legislative or regulatory history. They argued that using heat as a criterion improperly includes beneficiation operations within mineral processing. They claimed that production activities used in the beneficiation and extraction of gold demonstrate that certain pretreatment steps are necessary to prepare ore for leaching, and insisted that EPA not categorize any pretreatment steps as processing regardless of whether they involve heat treatment. Many commenters, in discussing using heat as a criterion, addressed calcining, roasting, and leaching operations that use thermal pretreatment (i.e., autoclaving, roasting, and chlorination). These comments are summarized below.

Roasting of ore, commenters contended, is incorrectly considered a mineral processing operation rather than beneficiation in the NPRM. They contended that roasting does not fit any of the other four processing attributes detailed in the rule; roasting does not remove desired product from an ore or mineral, does not use feedstock comprised of less than fifty percent scrap, and does not produce either a final product or an intermediate to the final product, and does not involve manufacturing, alloying, etc. They noted that under the proposed definition, any operation that follows roasting or autoclaving is considered mineral processing; leaching, however, is specifically defined as a beneficiation operation, and EPA should not separate out leaching operations that involve thermal treatment.

Regarding leaching operations, commenters, especially those in or representing the precious metals sectors (e.g., gold, silver), and the Bureau of Mines agreed with EPA that beneficiation should include physical/chemical separation techniques such as heap, dump, tank, vat, and *in-situ* leaching.[1] The commenters, however, argued that the use of heat as a pretreatment for the leaching operation should not automatically render an operation as processing, noting that ores and minerals which are roasted,

[1] EPA's policy toward leaching, as stated in a previous regulatory determination (see Regulatory Determination for Wastes From the Extraction and Beneficiation of Ores and Minerals, 51 FR 24496 (July 3, 1986)) is that active leach piles and leach solutions are not wastes, but rather are raw materials used in the production process and intermediate products, respectively. Only leach solutions that escape from the production process are considered wastes while the leaching operation is active.

autoclaved, or chlorinated are no less earthen than is raw ore, and their volume remains relatively unchanged. They noted that if finalized, the April, 1989 NPRM could subject tailings or spent ore from many leaching operations to subtitle C regulation, even though the Regulatory Determination of July 3, 1986 stated that these wastes did not require such regulation. Commenters claimed that, because the near surface precious metals deposits are being depleted, the future of the industry lies in the deeper sulfide zones that produce ores requiring some pretreatment (i.e., roasting, autoclaving, and chlorinating) to effectively yield their metal values. The Agency must consider, they argued, the extremely onerous operational consequences (e.g., requiring parallel waste units for identical waste streams) and economic consequences (e.g., putting small or marginal mines out of business) that would result from maintaining the processing definition in the most recent proposal; this definition would, concurrently, yield no significant environmental benefits. Therefore, the commenters requested that EPA clarify that wastes from leaching operations that pretreat will remain beneficiation wastes excluded from Subtitle C. Alternatively, they noted, if EPA retains the definition given in the April notice, the Agency will be required to restudy gold leaching wastes (gold roaster/leach wastes would not differ significantly from the leached ores studied previously by EPA in the 1985 Report to Congress) since they would meet the high volume criterion.

Calcining, the heating of ores to high temperature without fusion of the mineral values (generally to drive off volatile components such as water and carbon dioxide), also received extensive comment from commenters who were concerned that EPA considered calcining to be processing. These commenters suggested that EPA should limit its clarification of beneficiation to exclude only those heating operations where the calcining gases effect a chemical change that will facilitate smelting. Representatives of the western phosphate processors, in particular, attacked the inclusion of calcining in processing, claiming that the sizing, drying, agglomeration, and concentration functions of calcining—which do not chemically alter the phosphate nor remove valuable constituents—meet EPA's definition of beneficiation and that the classification of phosphate rock calcining or drying and nodulizing/heating operations as beneficiation has long been the subject of agreement between EPA and the phosphate processors. The phosphorus industry stated that calcining is analogous to the calcining employed by diatomaceous earth producers which is regulated under subtitle D and argued that a supportable distinction can be made between metallurgical calcining and those heating operations found in the diatomaceous earth and phosphorus industries.

iii. *Make Other Modifications to the Beneficiation Definition.* As an alternative to using the RTC definition, industry commenters recommended several modifications to the definition of beneficiation.

- EPA should view beneficiation collectively and functionally, define beneficiation as activities, both physical or chemical, by which ores and minerals are prepared for further refinement. An operation which precedes beneficiation and/or conditions or prepares an ore or mineral so as to make it more amenable to beneficiation, should also be considered to be part of the beneficiation operation, regardless of whether the operation employs physical or chemical techniques. Removing impurities and improving quality is a purpose of beneficiation and coincides with the generally accepted technical usage of beneficiation.
- EPA should clarify that wastes from beneficiation operations that follow a processing step should be considered beneficiation wastes. Therefore, the Agency should state that any steps performed after beneficiation ends are processing operations and that processing would begin with the last beneficiation activity, not with the first processing activity. This clarification would draw a clear boundary between beneficiation and processing that would reflect "real world" operations better than the definition provided in the April 17, 1989 NPRM.
- If the Agency seeks to control specific beneficiation waste streams, it should use the Subtitle C "listing" mechanism as opposed to redefining beneficiation.

iv. *Specify Certain Activities as Beneficiation.* In addition to roasting, autoclaving, calcining, and leaching, many commenters addressed specific operations, recommending that EPA clarify that certain activities are beneficiation operations. Collectively, these commenters suggested that EPA adopt a definition of beneficiation that includes physical/chemical separation processes such as crushing, grinding, gravity concentration, magnetic and electrostatic separation, flotation, precipitation, amalgamation, ion exchange, solvent extraction, electrowinning, dissolution, chlorination, and agglomeration.

The following recommendations were made by commenters regarding specific operations.

- Electrowinning should be considered beneficiation and be retained under the Bevill exclusion. The April, 1989 NPRM states that electrolytic and other chemical techniques are processing, not beneficiation, directly and inappropriately contradicting prior EPA pronouncements and regulatory action on the scope of the beneficiation exemption.
- The carbon regeneration process in which activated carbon granules adsorb gold from solution should be considered beneficiation, as these activities conclude the leaching process, and therefore constitute beneficiation.
- The Agency should specifically include dissolution in the list of beneficiation operations. For example, trona wastes produced from the "Sesqui" process are beneficiation wastes, because the dissolving and calcining operations associated with the "Sesqui" process only remove insoluble tailings wastes and drive off excess water and carbon dioxide.
- EPA should clarify its definition of beneficiation by specifically identifying "filtration" and "physical separation" as sorting to be included as part of beneficiation.
- The Agency should continue to include agglomeration as beneficiation and not limit this term to sintering because it includes other processes besides sintering, such as pelletizing and briquetting.
- EPA should define the chlorination procedure, used on some carbonaceous ores prior to leaching, as a beneficiation operation, not as processing. The chlorination procedure uses an oxidizing agent to change the chemical composition of the ore and to enhance the leaching operation.
- EPA should state that the "chloride-ilmenite" process used for titanium dioxide processing is a simultaneous ore beneficiation and chlorination process in which beneficiation and chlorination of raw ilmenite ore are inseparably combined in the same process step. EPA should confirm its previous positions that these wastes are generated from a beneficiation process.

After review of the public comments and further analysis, the Agency has concluded that, both functionally and legally, the most appropriate definition of beneficiation for use in distinguishing between beneficiation and processing is the definition used in the December, 1985 Report to Congress (RTC) on

wastes from extraction and beneficiation of ores and minerals. This definition was, in turn, based upon a definition provided in the Effluent Guidelines Development Document. EPA believes that this definition is consistent with standard industry practice and use of the term. The RTC defines beneficiation as "the treatment of ore to concentrate its valuable constituents." [2] While the RTC did not attempt to articulate a comprehensive list of beneficiation operations, procedures or techniques, it did expound on the definition by describing beneficiation processes as including

> Physical/chemical separation techniques such as gravity concentration, magnetic separation, electrostatic separation, flotation, ion exchange, solvent extraction, electrowinning, precipitation, and amalgamation." [3]

In addition, the RTC explicitly includes leaching operations as an integral part of the extraction and beneficiation domain and labels the leachate as a "beneficiation solution." [4]

While this definition serves well as a foundation for making a distinction between beneficiation and mineral processing, the list in the RTC is not an all-inclusive list of beneficiation processes and several points of clarification are necessary regarding application of this RTC definition to real-life operations. For example, the RTC list does not include milling techniques such as crushing, grinding, washing, filtration, sorting, and sizing, or agglomeration techniques such as sintering, pelletizing, and briquetting that both industry and EPA consider to be beneficiation operations. In order to avoid further confusion, the Agency wishes at this time to identify other activities that it considers to be within the realm of beneficiation, and in particular to discuss the status of activities using heat and acid.

EPA notes here that the definitions that it has developed for today's rule represent an attempt to resolve the issues raised in public comment on the proposed rules in a reasonable and even-handed manner. The Agency recognizes that its course is not the only one available, but does believe that it provides the most equitable and workable approach to a very complicated set of issues. Furthermore, while EPA has attempted to develop consistent and reasonable definitions for and distinctions between beneficiation and processing, the Agency believes that application of these definitions must comport with common sense. In cases where a rigid application of a definition would result in an unreasonable outcome, the Agency has used best professional judgment to produce an acceptable result.

Heating steps recognized by EPA as beneficiation operations are calcining, and roasting and autoclaving of ores and minerals in preparation for leaching. All three are procedures that use heat to drive off volatiles (e.g., water, carbon dioxide, sulfur dioxide) without heating the material above the mineral's melting point and/or causing fusion (i.e. liquefying or rendering plastic by heat [5]). Operations that raise the temperature of the ores or minerals, or beneficiated ores or minerals, above their fusion or melting point, i.e., destroy the physical structure of the ore or mineral, are considered processing operations.

Calcining is often used to drive off carbon dioxide in the preparation of a final beneficiated product (e.g., talc, gypsum, lime), and for purposes of this rule is defined as the heating of an ore or mineral, or beneficiated ore or mineral to a temperature below the melting or fusion point, for purposes of driving off water (including waters of hydration) and/or carbon dioxide.

In the minerals industry, roasting serves primarily to change a sulfide ore to the oxide form, so that beneficiation by leaching or other subsequent steps may be more effectively performed. Functionally similar to roasting, autoclaving uses steam to perform heating activities (e.g., pretreating sulfide ore for leaching). For purposes of this rule, roasting and autoclaving are considered beneficiation operations if they are used to remove sulfur and/or other impurities in preparing an ore or mineral, or beneficiated ore or mineral, for leaching. Otherwise, roasting and autoclaving are defined as processing operations. Accordingly, activities such as roasting sulfide ores in preparation for precious metals heap leaching are considered beneficiation, while roasting ores or concentrates in preparation for copper, lead, or zinc smelting is specifically defined as processing.

Chlorination is sometimes used prior to gold leaching operations in a procedure functionally identical to roasting and autoclaving (i.e. to change a sulfide ore to a chemical form more amenable to leaching). EPA recognizes that this type of pretreatment operation may be an integral part of leaching operations, and accordingly, considers non-destructive chlorination of ores, minerals, or beneficiated ores or minerals when used as a pretreatment step for leaching, to be a beneficiation operation.

In contrast, heating operations such as smelting (i.e., any metallurgical operation in which metal is separated by fusion from impurities [6]) and fire-refining (e.g., retorting) are clearly and have always been considered within the realm of mineral processing. Here, the physical structure of the ore or mineral is destroyed, and neither the product stream nor the waste stream(s) arising from the operation bear any close physical/chemical resemblance to the ore or mineral entering the operation.

A specific exception to the above categorization system applies when the roasting/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing steps (e.g., the leach liquor serves as an input to inorganic chemical manufacturing). In this type of situation, the Agency believes that the operation is most appropriately considered a processing, rather than a beneficiation, operation. In the context of this rulemaking, one candidate Bevill waste (roast/leach ore residue from primary chrome ore processing) is affected by this distinction; EPA believes that this material is clearly a waste from processing, rather than beneficiation, of an ore or mineral.

Several additional operations employ heat in combination with various acids. In EPA's view, some of these operations constitute beneficiation while others are processing. The distinction hinges upon the difference between dissolving, washing, or otherwise purifying values contained within a mineral using a dilute acid solution (beneficiation) and attacking or digesting (i.e., destroying the structure of) the ore or mineral, or beneficiated ore or mineral, using a strong acid (processing). Acid dissolution, often accompanied by heat, is used as precursor for many beneficiation operations (e.g., precipitation, fractional crystallization, ion exchange, solvent extraction). EPA recognizes this as an activity integral to many beneficiation operations, regardless of the application of heat or use of acid. For example, EPA recognizes acid washing and acid dissolution as beneficiation activities; concentrated sulfuric acid attack of titanium- or phosphate-bearing ores is

[2] Ibid., D-1.

[3] Report to Congress on wastes from Extraction and Beneficiation of Metallic Ores, Phosphate Rock, Asbestos, Overburden from Uranium Mining, and Oil Shale, pg 2-15.

[4] Ibid., 2-16, D-4.

[5] U.S. Bureau of Mines. "A Dictionary of Mining, Mineral, and Related Terms". Washington, DC: 1972, p. 473.

[6] Ibid., pg 1033.

considered a processing operation by the Agency.

In considering the functional distinctions between beneficiation and processing using both heat and acid, EPA has examined both the range of actual practices employed, and the types of waste streams that are generated by these operations in various mineral commodity sectors. In a general sense, the lines that the Agency has drawn between beneficiation and processing parallel the common sense differences that can be observed between beneficiation and processing wastes generated using other types of mineral exploitation techniques. Most beneficiation processes, at least those immediately upstream from the initial processing operation in a production sequence, generate high volume solid waste streams that are essentially earthen in character. Despite the fact that valuable constituents have been removed, the remaining material is often physically and chemically similar to the material (ore or mineral) that entered the operation, except that particle size reduction has often occurred. Processing operations, in contrast, generate waste streams that generally bear little or no resemblance to the materials that entered the operation (with the arguable exception of smelting slags). These operations most often destroy the physical structure of the mineral, producing product and waste streams that are not earthen in character.

This common sense distinction is reflected in EPA's definitions of beneficiation and processing operations using heat and acid. The beneficiation operations (e.g., calcining, dissolution, roasting in preparation for leaching) produce wastes, where applicable, that are essentially earthen and of relatively high volume. The processing operations (e.g., smelting, acid or alkaline digestion), on the other hand, produce wastes that are not earthen, bear little resemblance to the materials that entered the operation, and are of relatively lower volume.

One final beneficiation/processing issue is the need for an absolute cut-off between processing and beneficiation, a need that was questioned by commenters. EPA continues to hold that beneficiation, especially as a functional activity which serves to concentrate the mineral value, is completed at some distinct point after which all operations are considered processing. As discussed in the April NPRM, the Agency considers any operations following the initial processing operation to be processing operations, regardless of whether the activity was included on the list of RTC beneficiation activities or has traditionally been considered beneficiation. For example, electrolytic refining, an operation often used after smelting and/or fire refining, uses procedures similar to activities listed in the RTC definition (e.g., electrowinning) or considered historically to be beneficiation (e.g., dissolution). Because, however, the operations follow previous processing operations, these activities will be considered processing and any associated wastes will be considered mineral processing wastes.

EPA acknowledges that the decision to use this beneficiation definition is a significant departure from the position taken in the October and April NPRMs, particularly with respect to the use of heat and acid. After analysis of public comments, further review of technical information regarding mineral beneficiation and processing techniques, and reexamination of the 1985 Report to Congress and 1986 Regulatory Determination, the Agency has concluded that this definition will render the most accurate, practical, and reasonable delineation between beneficiation and processing. Furthermore, the Agency expects that little environmental benefit would be gained by including these additional operation types within "mineral processing" because the Agency believes that the wastes from these operations are relatively few in number, have in a number of instances already been studied, and will in any case be addressed by the Subtitle D regulations for extraction and beneficiation wastes presently under development by the Agency.

b. *Operation must serve to remove the desired product from, or enhance the characteristics of, an ore or mineral, or a beneficiated ore or mineral.* Commenters addressing this attribute in the October 20, 1988 NPRM indicated that the language (i.e., to remove the desired product from an ore or mineral or beneficiated ore or mineral) obscured the regulatory status of certain processing operations (e.g., lightweight aggregate production) whose purpose is to change the characteristics of valuable constituents in ores or minerals without removing or concentrating them. They suggested, and EPA agreed, that the processing definition be modified to include operations that serve to enhance the desirable properties of, as well as those that remove the desired product from, an ore or mineral. EPA modified the second attribute of mineral processing to include production steps that use heat to alter the chemical composition of ores or minerals, or beneficiated ores or minerals. Many commenters addressing the April NPRM argued vehemently that EPA should not include all operations which use heat for operations other than drying in the definition of mineral processing, indicating, as discussed in the previous section, that these operations are often a part of beneficiation activities. Several commenters stated that this attribute should be written to specifically include operations that enhance the desirable properties of materials, leaving the concern of whether to include heating operations to the first attribute, which defines the delineation between beneficiation and processing.

After review of the comments and analysis of additional information, EPA has acknowledged the need to change this second attribute of mineral processing by modifying the "heat" criterion that considered production steps using heat to alter the chemical composition of ores or minerals (or beneficiated ores or minerals) to be mineral processing operations. The Agency agrees that the use of heat should not be the determining factor, primarily because many beneficiation operations use heat as a pretreatment to enhance the properties of the ore for subsequent beneficiation steps and because EPA does not wish to include operations already established to be beneficiation operations (e.g., leaching, phosphate rock beneficiation) within the domain of mineral processing, particularly if the sole reason for classifying them in this way is the use of heat. Therefore, in today's final rule, the Agency has removed its stipulation that operations using heat are automatically processing operations, but has allowed that operations that enhance the characteristics of the ore or mineral, or beneficiated ore or mineral, are mineral processing if the operations meet the other attributes.

c. *Operation uses feedstock that is comprised of less than 50 percent scrap materials. The 50 percent rule applies to all materials entering a process operation that contain the mineral value rather than all materials entering the operation irrespective of function.* The October 20, 1988 NPRM required that at least 50 percent of the feedstock to an operation be ore or mineral, or beneficiated ore or mineral, for the operation to be considered a primary mineral processing operation. Many commenters responding to that NPRM sought clarification concerning what materials are to be included as part of the "primary" feedstock, recommending that "in-process" materials derived from mineral processing should be considered

"primary" feedstocks along with ores or minerals or beneficiated ores or minerals for the application of this fifty percent rule. In the preamble to the April NPRM, EPA asserted that the attribute, as presented in the October NPRM, affords (1) considerable flexibility to mineral processing operations, in that they are able to accept scrap and intermediate materials in their feedstocks and still be eligible for Bevill status, while (2) still maintaining the essential upper bound on the amount of non-ore present in a feedstock in order to ensure that wastes from operations that primarily process materials other than ores and minerals are not provided with an exclusion that Congress did not intend.

EPA also clarified in the April NPRM that the 50 percent rule applies to all mineral-value containing materials entering a process operation (e.g., crushed copper ore, beneficiated copper ore, in-process materials, and scrap copper for the copper smelters), rather than to the total of all materials (i.e., mineral values plus non-mineral materials such as fuel, reducing agents, or fluxing agents) entering the operation. EPA also clarified that the accounting period over which to analyze feedstock percentages should be one year, which allows for seasonal fluctuations, and that the rule must be applied to individual processing operations (e.g., the smelter separate from the refinery) rather than to an entire plant's operations.

The predominant comment addressing the April, 1989 NPRM again concerned the accounting for in-process materials. Several commenters reasserted that "in-process" materials derived from mineral processing and returned to the process should be considered mineral feedstock since they are used as a matter of course by the industry as feedstock because of their significant mineral value. One industry commenter disagreed with using this attribute at all, calling for EPA to abandon the fifty percent rule because it is an unrealistic and unnecessary restriction and an unwarranted intrusion into the production process.

As stated in the preamble to the April NPRM and further described above, EPA believes that the rule as written provides an extremely flexible tool for screening out secondary processors from the universe of primary mineral processors (the only group eligible for the Bevill exclusion), while allowing (1) large percentages of scrap to be used in primary processing operations and (2) seasonal and other variation in the proportions of feedstock materials without affecting the potential Bevill status of associated wastes. After reviewing the comments and also noting that this criterion does not, to EPA's knowledge, affect any wastes generated by primary mineral processors, the Agency has decided that it will make no changes in this attribute as first presented in the October NPRM and clarified in April.

d. *Operation produces either a final, or an intermediate to the final, mineral product.* The definition of processing in both the October and April NPRMs requires that, to be eligible for consideration for the Bevill exclusion, the operation must produce either a final mineral product or an intermediate to the final mineral product. EPA believes that products not directly related to mineral processing operations do not fall within the scope of the definition intended by Congress. Several commenters argued that EPA should follow Congress' intended broad view of the term "processing" and include all parts of integrated operations; no commenters, however, directly challenged EPA's position by nominating wastes arising from non-mineral-related processes that may be co-located with mineral process operations for exclusion under Bevill.

In this final rule, the Agency maintains the position articulated in the two proposals; that Congress did not intend the Bevill exclusion to extend to processing operations outside the production of an intermediate or final mineral product, i.e., a material of value derived primarily from an ore or mineral. This attribute ensures that other operations (e.g., chemical processing), even if physically located with a mineral processing operation, that produce a non-mineral product that may or may not be used as a feedstock to a mineral processing operation will not be included within the realm of mineral processing. The Agency also wishes to clarify that the distinction between intermediate and final products refers to whether the mineral value must undergo further mineral processing. Materials that are saleable, either as raw materials to other types of industrial processes (e.g., chemical manufacturing) or as finished products are considered final products. Materials that must undergo further mineral processing to be rendered saleable, or that have no significant value except as a feedstock to a mineral processing operation, are considered intermediate products. Examples of this latter category include ilmenite ore slags used in titanium production and electrowinning slimes that are processed for metals recovery.

e. *Operation does not combine the mineral product with another material that is not an ore or mineral, or beneficiated ore or mineral (e.g., alloying); and do not involve fabrication or other manufacturing activities.* The preceding attribute establishes that a mineral processing operation must produce a mineral product, whether final or intermediate. This attribute establishes that once that final product has been produced, no other operations performed on or with that product are considered to be within the realm of mineral processing, i.e., mineral processing has ended. In general, the end of mineral processing is the point at which the processed ore or mineral (1) is combined with another material that is not an ore or mineral, or beneficiated ore or mineral (i.e., combining processed ores or minerals such as steel with purified non-ferrous metals to produce an alloy is not mineral processing), (2) undergoes fabrication (e.g., manufacturing of copper wire), (3) is subjected to other manufacturing operations (e.g., chemical processing), or (4) is marketable and can be sold, even if the product must undergo further non-mineral processing prior to being amenable to an ultimate end use (e.g., titanium tetrachloride, an intermediate product used for the production of titanium metal and titanium dioxide, is saleable and is often sold to other producers for manufacturing inorganic chemicals; any operations following the production of this intermediate, irrespective of whether they occur on-site, are not considered to be within the realm of mineral processing).

The Agency believes that Congress, in adopting the Bevill Amendment, intended to include only those processes that remove, concentrate, and/or enhance values contained in ores and minerals, or beneficiated ores and minerals, and that manufacturing, chemical processing, and alloying operations clearly do not fit into this category. EPA continues to believe that the casting of anodes or cathodes is not a fabrication operation, but is instead an operation necessary for the production of an intermediate or final (i.e., saleable) product and is therefore within the realm of mineral processing.

One general view expressed by many commenters addressing both NPRMs was that EPA should follow Congress' intended broad view of the term "processing" and include all stages from beneficiation through production of final products, including integrated operations. Some commenters offered

specific examples in support of their position.

For example, one commenter objected to EPA's preliminary conclusion that the production of ammoniated phosphates does not constitute mineral processing because it involves further processing of an intermediate mineral processing product, arguing that (1) production of ammoniated phosphates is enhancement of an intermediate to a final mineral product, since phosphoric acid must be further processed in order to be usable as fertilizer and (2) EPA regards ammoniated phosphate production as a part of phosphate processing under the Clean Water Act, and no rational basis exists for reaching a different conclusion under the Bevill Amendment. Other commenters similarly argued that wastes from alloying processes should be included, but nominated no large volume "post-processing" wastes.

In contrast, several other commenters argued that EPA should narrow the definition of processing via this attribute, and not finalize a definition of mineral processing that leaves virtually unchanged the extremely broad 1980 definition of mineral processing. In particular, these commenters stressed that the processing definition should not exempt operations that occur after the identity of the ore or mineral is destroyed. They stated, for example, that in production of titanium dioxide using the sulfate process a "slag" is produced from smelting beneficiated ilmenite ore in an electric arc furnace. This "slag", they argued, is a final mineral product which is then chemically processed (i.e., "washed with sulfuric acid" and "calcined"), and thus operations subsequent to the smelting should not be exempted. Similarly, the commenters argued that, in the case of titanium dioxide production using the chloride process, no wastes generated subsequent to chlorination should be eligible for the Bevill exemption, because titanium tetrachloride is the final mineral product and any subsequent operations are not to be considered processing.

Following review of these comments and additional analysis, EPA has concluded that none of the public comments received on the two proposals or any additional information received by the Agency support any substantial revisions to this attribute, though some clarifications are discussed here. The Agency maintains that Congress did not intend the Bevill exclusion to extend to processing operations that are performed after the production of a saleable mineral product. Phosphoric acid, for example, is a saleable mineral product that is purchased by diverse industries and has many uses in manufacturing and as a feedstock for further chemical processing. Thus, the manufacture of ammoniated phosphate fertilizer by adding ammonia to phosphoric acid, is not a mineral processing operation; this is chemical processing that uses a saleable mineral product as a feedstock. Likewise, EPA considers titanium tetrachloride, produced during the titanium chloride process, to be a saleable product; any processing subsequent to its production is considered to be chemical processing. In contrast, titanium-bearing slag generated in blast furnaces is considered eligible for continued Bevill exclusion, because although it is a saleable intermediate product, it has no significant end use except for additional mineral processing. Accordingly, the processing of this slag using sulfuric acid digestion is a mineral processing operation rather than a chemical processing operation, and all qualifying wastes from this process are Bevill wastes.

4. Residuals From Treatment of Excluded Mineral Processing Wastes Are Eligible for Exclusion Provided That They Meet the High Volume and Low Hazard Criteria

The October and April NPRMs both articulated EPA's intention to include as processing wastes the residuals from the treatment of excluded mineral processing wastes, but only if those residuals independently meet the criteria for special waste status. Several commenters specifically suggested that for clarity EPA should list for study, in the regulation itself, the category "residues from the treatment of all mineral-processing wastes on the preceding list which are generated at a rate greater than the high volume criterion established by EPA." Other commenters argued that the special waste criteria should not be applied to treatment residuals, recommending that EPA include in the regulation itself on the list for study "residues from the treatment of all mineral processing wastes on the preceding list regardless of the rate of generation." One commenter noted that treatment and discharge of process water in its industry is limited by the Clean Water Act and, as a result, treatment residuals are limited in volume and thus do not meet the high volume criterion because of other regulatory demands. Another claimed that EPA must evaluate actual waste management practices and impacts to human health and the environment before deciding that residuals are subject to subtitle C. Finally, one commenter stated that EPA should be consistent in applying its definition of process wastewater and include aqueous pollution control residuals with process wastewaters, claiming that EPA provided no rationale for the statement that process wastewater does not include aqueous waste streams from pollution control devices.

After review of the comments, EPA continues to believe that the most appropriate interpretation of the term "solid waste from the processing of ores and minerals" should include pollution control residuals that are presently generated as long as such residuals meet the high volume and low hazard criteria required for all excluded wastes. By including qualifying pollution control residuals on the list of wastes excluded under the Bevill Amendment, the intent of Congress will be achieved by allowing further study of these high-volume, low-hazard wastes. EPA does not believe it appropriate to treat low volume pollution control residuals as exempt wastes regardless of the reason why these wastes are not generated in high volumes.

5. The Processing Definition Could Be Narrowed by Adding a Co-Location Requirement

In the April NPRM the Agency solicited comment concerning whether the definition of "mineral processing" should be further narrowed by confining "mineral processing" to only those mineral processing operations that are co-located with extraction and beneficiation operations. Some commenters encouraged EPA to narrow the definition of processing and include only those processors that are co-located with beneficiation operations, stating that: (1) The co-locational requirement is an inherent aspect of the Bevill exemption, (2) the legislative history never indicated that wastes generated at locations divorced from extraction and beneficiation sites should be exempted, (3) that Congress never intended non-mining industries (e.g., the chemical industry) to have Bevill-exempt wastes, and (4) EPA itself, in the 1980 interpretation, indicated only wastes that are co-located should be exempted.

Many other commenters insisted that EPA do nothing to further narrow the definition of processing, especially by limiting the exemption to processors that are co-located with beneficiation operations. They contended that: (1) This narrowing would be inconsistent with the language of the Bevill

Amendment, the intent of Congress, and the interpretation of the Court, (2) wastes will exhibit the same intrinsic high volume, low hazard, and other characteristics regardless of their location relative to extraction and beneficiation operations, (3) if the Agency ignores site characteristics which directly affect risk (i.e., hazard) potential, then site characteristics which have no effect on risk—such as co-location, must also be disregarded, (4) if EPA relies on the special waste concept to define processing, then the Agency must recognize that the 1978 proposal as well as EPA's Draft Background Document do not give any indication that only processing operations at integrated facilities should be eligible for the Bevill exclusion, (5) many if not most sectors ship from mines to beneficiation and/or processing facilities, (6) co-location could threaten the environment if processing facilities are moved to the sensitive areas in which mines are often located, and (7) no significant domestic extraction or beneficiation occurs in some sectors, making it impossible to perform the processing (e.g., chromite ore roasting/leaching, manufacture of hydrofluoric acid) in close proximity to beneficiation anywhere in the U.S.

After further review, EPA has decided that a further narrowing of the processing definition using a co-location criterion or any other limitation is not appropriate or required by Congressional intent as reflected by the legislative history. Furthermore, the co-location requirement could conceivably create major inequities between facilities within sectors because some facilities in a sector may be co-located while others are not, and between sectors because some sectors rely entirely on foreign ore supplies and others do not; the volume or hazard of wastes in these sectors are largely unaffected by the location of the extraction and beneficiation operations providing their feedstocks. Therefore, EPA will continue to use the definition delineated above (i.e., solid waste uniquely associated with mineral processing and meeting all of the five attributes of mineral processing) and has not employed any additional criteria that would narrow the definition of "mineral processing."

E. Related RCRA Issues

1. Applicability of the Mixture Rule

The April 17, 1989 NPRM stated that EPA would apply the mixture rule to Bevill and non-Bevill mixed waste streams under almost all circumstances. Under this policy, mixtures of one or more listed hazardous wastes and a large volume, low hazard mineral processing waste would be considered a hazardous waste unless and until the mixture is delisted. EPA proposed, however, that in the case of mixtures of non-excluded "characteristic" wastes and Bevill wastes, the mixture would be considered a hazardous waste if it exhibits one or more of the same hazardous characteristics that are exhibited by the non-excluded waste. If, on the other hand, the mixture exhibits one or more hazardous characteristics exhibited by the Bevill waste but not by the non-excluded characteristic waste, then the mixture would not be a hazardous waste. Furthermore, mixing a characteristic hazardous waste with a Bevill waste would constitute treatment of a hazardous waste, and would be subject to the appropriate regulation for the treatment, storage, or disposal of hazardous wastes, including obtaining a permit.

Several commenters asserted that the Agency's preliminary position on the mixture rule is inappropriately lax and should be modified to regulate co-managed waste mixtures more stringently. These commenters argued that mixtures of Bevill and non-Bevill wastes do not meet the low hazard criterion for Bevill exclusion. Commenters also stated that co-management typically occurs subsequent to initial processing, and thus does not fall within the scope of the Bevill exclusion.

Other commenters argued that the proposed application of the mixture rule is overly strict. These commenters stated that applying the mixture rule as proposed would discourage environmentally protective co-management. Commenters specifically recommended that mixtures of non-Bevill characteristic or listed wastes and Bevill wastes be regulated as hazardous only when the resulting mixture (1) demonstrates a hazardous characteristic not exhibited by the Bevill waste, or (2) is more hazardous than the Bevill waste alone. These commenters stated that the Agency should exempt mixtures of characteristic or listed mineral processing wastes with Bevill wastes when the disposal of the Bevill waste is subject to the requirements of a State or Federal program to control groundwater contamination, provided that the waste is completely characterized such that the effects of mixing on the non-exempt waste can be assessed and considered by the applicable regulatory agency.

Other commenters argued that regulating mixtures of subtitle D extraction and beneficiation wastes and non-Bevill mineral processing wastes under subtitle C contradicts EPA's July 3, 1986 Regulatory Determination that extraction and beneficiation wastes will be excluded from all aspects of the regulatory program. These commenters requested that the Agency provide a reason for not complying with the Regulatory Determination. In urging the Agency to exempt mixtures of extraction and beneficiation wastes and non-Bevill mineral processing wastes from the subtitle C mixture rule, these commenters drew an analogy to the fact that the Agency has consistently maintained that mixtures of Bevill utility wastes and non-Bevill utility wastes are not subject to regulation under subtitle C. Other commenters, noting that the Agency is concerned that industry might dilute their subtitle C processing wastes with extraction and beneficiation wastes to avoid subtitle C regulation, suggested that the Agency prohibit intentional dilution of hazardous waste streams for the purpose of avoiding subtitle C regulation. These commenters contended that this approach has been taken in the Land Disposal Restrictions Program, and has been endorsed by the D.C. Circuit Court in regulations concerning multi-source leachate.

Some commenters stated that requiring a treatment, storage, or disposal permit when mixing characteristic hazardous wastes with Bevill wastes is particularly onerous. These commenters argued that requiring a permit when mixing wastes would render any relief made available under the proposed modifications to the mixture rule meaningless. Other commenters recommended that immediate elementary neutralization of a RCRA corrosive waste with a Bevill waste should be exempt from RCRA permitting requirements. These commenters argued that such a mixture exhibits no hazardous characteristics, the treatment is instantaneous, and the entire mixture would be inappropriately regulated under subtitle C.

Several commenters recommended that the Agency exempt *de minimis* mixtures of listed hazardous wastes with other mining wastes. These commenters asserted that such a policy would be consistent with the Agency's position regarding the derived-from rule and would result in enhanced protection of the environment. These commenters stated that *de minimis* mixing is sometimes performed in order to comply with NPDES requirements. Other commenters stated that a *de minimis* exemption would be consistent with the findings of the Agency's first Report to Congress, which found that subtitle C

regulation of these waste streams was unnecessary.

Some commenters argued that the proposed modifications to the mixture rule conflict with Congressional and Court ordered requirements to perform studies of particular waste streams. These commenters stated that all processing wastes are temporarily exempt from all provisions of subtitle C—including the mixture rule—until the special study is completed and a Regulatory Determination is completed. Other commenters contended that the Court interpretation of the legislative intent of the Bevill Amendment supports the argument that the beneficial effects of waste mixing should be incorporated into the low hazard criterion, and if insufficient data are available to do so, then the Agency should further study the effects of mixing practices.

Finally, commenters argued that particular waste streams and classes of wastes should not be subject to the modified mixture rule and that they should remain eligible for the Bevill exclusion. Waste streams include bauxite red mud mixed with red scale, Lurgi wet scrubber effluent mixed with alkaline tailings at primary copper facilities, minor waste streams from the electrowinning and refining of gold mixed with tailings, and small amounts of waste mixed with sulfuric acid storage tank clean-out and recirculation water from phosphate processing.

The Agency has reviewed and considered these comments, and has concluded that it is consistent with the intent of Congress and the Court, and most protective of human health and the environment, to continue to apply the mixture rule to Bevill and non-Bevill mixed waste streams as described in the April 17, 1989 NPRM. Only in this way can the Agency ensure that an unintended regulatory exclusion is not afforded (e.g., through intentional dilution with high volume Bevill wastes) to small volume hazardous mineral processing wastes that should rightly be subject to Subtitle C requirements. By so doing, mixtures of small volume mineral processing wastes and Bevill wastes are potentially subject to subtitle C requirements, and the act of mixing them will require a subtitle C treatment permit. For the same reasons, EPA also does not see any reason to carve out particular exceptions for the waste stream mixtures cited by commenters.

Because many facilities may lack historical knowledge of the relevant concentrations of constituents and volumes of the characteristically hazardous non-excluded pre-mixed solid wastes, and pre-mixed Bevill wastes comprising the characteristically hazardous Bevill waste mixtures, EPA does not believe that a baseline risk approach is feasible. This also is why EPA's approach to these characteristic mixtures differs from the approach retained today regarding listed mixtures. (See also the discussion regarding utility wastes above). Further, concerns over enforceability of alternative approaches have convinced EPA that the approach adopted here is necessary to assure that nonexcluded characteristically hazardous wastes are properly managed and are not improperly mixed with Bevill wastes so as to avoid regulation.

The argument that EPA's position is in conflict with the 1986 Regulatory Determination for extraction and beneficiation wastes or Congressional and Court directives regarding these Bevill wastes is specious; the issue at hand is regulation of low volume hazardous mineral processing wastes, not regulation of Bevill wastes. Non-Bevill mineral processing wastes that are hazardous are subject to all aspects of the subtitle C regulations, including the mixture rule. Mixtures of Bevill and non-Bevill processing wastes will be treated in the same manner, notwithstanding the fact that EPA has not yet studied Bevill processing wastes. Further, even were EPA to agree that the mixture rule were inapplicable to the Bevill waste mixed with hazardous waste, mixtures of listed hazardous wastes with Bevill wastes would continue to be subject to regulation because the "mixture" would "contain" listed hazardous waste, subject to regulation unless delisted. See *Chemical Waste Mgmt., Inc.* v. *EPA*, 869 F.2d 1526 (D.C. Cir. 1989).

Moreover, the Agency finds no compelling reason to provide exemptions for particular small volume wastes that may be associated with mineral processing operations, such as cleaning wastes. Many other industrial operations also generate such wastes, and EPA does not believe that the fact that current management involving co-management justifies continued regulatory exclusion for wastes that are not uniquely associated with mineral processing (and therefore are not defined as mineral processing wastes) and would not, in any event meet the high volume criterion.

Finally, providing regulatory exclusions for mixtures of Bevill and non-Bevill mineral processing wastes would provide disincentives for developing ways to minimize hazardous waste generation. This would be in direct conflict with one of the Agency's major policy goals, that of pollution prevention.

2. Applicability of the Derived-From Rule

The April 17, 1989 NPRM stated that the Agency will clarify the application of the derived-from rule in a supplemental notice (expected in mid-1989) to the May 6, 1987 proposed rules for boilers and industrial furnaces burning hazardous waste. In the interim, the proposal stated that the Agency would adhere to its prior statements on this issue, i.e., that wastes from comanaging hazardous wastes and Bevill materials remain within the scope of the Bevill exclusion so long as the character of the residues is not significantly affected by the hazardous waste management activity. To the extent that co-combustion residues are significantly affected, they could no longer be considered to truly arise from processing an ore or mineral (or from other activities addressed by the Bevill Amendment). See 50 FR 49190 (November 29, 1985); 52 FR 17012–13 (May 6, 1987) for further information.

Many commenters responded to the proposed rule by requesting that the Agency immediately clarify its position on the derived-from rule and provide a supplemental notice to the final rule for boilers and industrial furnaces. Other commenters argued that Congress clearly did not intend for the Bevill Amendment to exempt the burning of hazardous wastes in smelter furnaces. These commenters further argued that the Agency's position on the derived-from rule rewards dilution as a means of disposal and is unlawful and overly broad. Commenters suggested that if the Agency determines that combustion residuals from burning hazardous waste with Bevill exempt materials are in fact exempt from Subtitle C, then the Agency should include an assessment of the potential health and environmental impacts of burning in the Report to Congress.

Other commenters stated that wastes from industrial furnaces burning hazardous waste fuel should remain under the Bevill exclusion as long as the character of the residue is not significantly affected by the management activity. These commenters argued that the air pollution control residues from hazardous waste-fired kilns are Bevill wastes just as are residues from coal-fired kilns.

The Agency has reviewed and evaluated these comments regarding the derived-from rule. As indicated in the April NPRM, EPA will clarify the application of the derived-from rule in a supplemental notice to the May 6, 1987 proposed rules for boilers and industrial

furnaces burning hazardous waste. We expect this notice to be published during the next several months. Until then, wastes from co-managing hazardous wastes and Bevill materials remain within the scope of the Bevill exclusion so long as the character of the residues is not significantly affected by the waste management activity.

Effects of the Land Disposal Restrictions

Commenters argued that the Agency has misinterpreted the land disposal restrictions (LDR) as they relate to mineral processing. According to commenters, the LDR will not be automatic for non Bevill mineral processing wastes that exhibit hazardous characteristics as of May 1990. Also, these commenters stated that EPA's statutory mandate to conduct a detailed and comprehensive review of mineral processing wastes requires the Agency to take into account the potential effect of the LDR rulemaking. If the Agency considers eliminating the Bevill exclusion as applied to a particular materials stream, it should, according to these commenters, only do so in the context of a land ban BDAT determination.

The statutory mandate to conduct a detailed and comprehensive review applies only to Bevill wastes, not to the other mineral processing wastes removed from Bevill by today's final rule. Therefore, EPA is under no obligation to consider the effects of potential land disposal restrictions on mineral processors prior to removing non-Bevill mineral processing wastes from the exclusion.

A further question exists as to the status of the wastes withdrawn from the exclusion under the land disposal restriction provisions that establish a schedule for prohibiting untreated hazardous wastes from land disposal. Once withdrawn from the Bevill exclusion, these wastes will be identified as hazardous if they exhibit a hazardous waste characteristic; none will be listed (at least at this time). The statute provides with respect to wastes identified because they exhibit a hazardous waste characteristic that EPA must promulgate prohibitions and establish treatment standards for "all hazardous wastes identified under 3001" by May 8, 1990. RCRA section 3004 (g)(4)(C). (EPA interprets this language as referring to the wastes identified as hazardous as of November 8, 1984, the date of enactment of the HSWA amendments because they exhibit one or more hazardous characteristics.) Wastes newly identified after November 8, 1984 must be prohibited from land disposal, and EPA must develop a treatment standard for them, within six months after they are newly identified. RCRA section 3004 (g)(4).

EPA believes that the wastes withdrawn from the exclusion are "newly identified" for purposes of these provisions. Although technically the wastes are not being identified by a new characteristic, they are being brought into the subtitle C system after the date of the 1984 RCRA amendments. The Agency plans to address wastes brought in under subtitle C by this rule further in the proposed land disposal restrictions for the Third scheduled wastes.

However, because any hazardous waste, including newly identified wastes, is subject to the requirements of the California List and Solvents and Dioxins final rules, the most important question is how the State programs are affected. Today's final rule removing certain mineral processing wastes from the Bevill exclusion is not being imposed pursuant to the HSWA and therefore today's rule is not effective in authorized states. Thus, as discussed more fully below, today's regulation is applicable only in those states that do not have interim or final authorization. Authorized states that do not have a Bevill exclusion or analog, i.e., all mineral processing wastes are already eligible for regulation as hazardous wastes by the state, are already subject to the land disposal restrictions for California List and Solvents and Dioxins wastes.

4. RCRA Section 3004(x)

As part of the 1984 HSWA Amendments, Congress incorporated a provision allowing the EPA Administrator to relax certain of the Subtitle C standards contained in the new amendments as they relate to the management of mining wastes, utility wastes, and cement kiln dust wastes. This provision, found at section 3004(x), is commonly called the "Simpson Amendment." The Simpson Amendment allows EPA to modify the minimum technical standards for the design, construction, and operation of waste management units, land disposal restrictions, and corrective action requirements for continuing releases, as long as protection of human health and the environment is assured. In the April 17, 1989 NPRM the Agency explained that the provisions of the Simpson Amendment, and hence the opportunity for flexible application of Subtitle C requirements, apply only to the special wastes identified in the statute. Accordingly, the Simpson Amendment would not apply to wastes that are not special wastes and that would therefore be removed from the Bevill exclusion by the proposed rule.

Commenters argued that EPA's interpretation of the Simpson Amendment as applicable only to wastes retained within the Bevill exemption is incorrect and contrary to the legislative history. These commenters asserted that the legislative history of the Simpson Amendment indicates that it was meant to apply to all mining wastes and that its purpose was to clarify the Agency's authority to develop special standards for wastes removed from the Bevill exemption. On this basis, these commenters urged EPA to adopt a broader position.

Other commenters argued that EPA's reliance on a 1984 Senate report to narrow the scope of the Simpson Amendment is questionable. Because the Simpson Amendment was adopted at a time when EPA's November 1980 interpretation of the Bevill Amendment was the controlling authority, and Congress did not take any action to limit or modify the November 1980 interpretation, "processing" must be understood, according to these commenters, to include wastes from milling, smelting, and refining of ores and minerals. Furthermore, according to these commenters, Congress recognized that some, but not all, special study wastes might become subject to subtitle C, in which case differential treatment under the Amendment would be appropriate.

After reviewing these comments and the intent of the Simpson Amendment, the Agency believes that the provisions of section 3004(x), and hence, the opportunity for flexible application of Subtitle C requirements, apply only to the wastes intended by Congress to be included within the Bevill Amendment exemption, i.e., the special wastes. Accordingly, section 3004(x) would not apply to wastes that are not special wastes and that would therefore be removed from the Bevill exclusion by this rulemaking.

EPA's interpretation of the scope of section 3004(x) is based upon a reading of the legislative history of the amendment. The legislative history is replete with references that 3004(x) was designed to allow flexibility to modify subtitle C for those wastes within the scope of the Bevill amendment, i.e., the special wastes. The Conference Report accompanying 3004(x) explains clearly that it would

> Encompass all of the so-called "*special study wastes*" described in section 8002 (f), (n), (o), and (p) that become subject to regulation under subtitle C. * * * This amendment recognizes that even if some of

the *special study wastes* are determined to be hazardous it may not be necessary or appropriate, because of their special characteristics and other factors, to subject such wastes to the same requirements that are applicable to other hazardous wastes, and that protection of human health and the environment does not necessarily imply the uniform application of requirements developed for disposal of other hazardous wastes."

Conf. Rpt. at 93 (emphasis added). The adoption of section 3004(x) is fully consistent with Congress' concern in 1980 that the special wastes may not necessarily be amenable to full Subtitle C controls due to the large volumes and potentially lower hazards. Such concerns would not hold for wastes which are not high volume, low hazard, and the Conference Report suggests that Congress was not concerned with applying section 3004(x) to such wastes.

The Conference Report goes on to explain that the authority of section 3004(x) "is intended to extend to all of the wastes *required to be studied by EPA* pursuant to section 8002 (f), (n), (o), and (p), and does not in any way alter *the existing scope* of section 3001(b)(3)(A)." *Id.* at 94 (emphasis added). Several commenters cited this language to indicate that the 3004(x) was designed to apply to all wastes which EPA defined within the scope of the Bevill amendment as of 1984, i.e., all mineral processing wastes regardless of volume or hazard. EPA does not agree the language can be so read. The Court of Appeals clearly ruled in EDF II that Congress never intended the Bevill Amendment to apply to wastes which are not high volume, low hazard special wastes. Thus, even in 1984, the "existing scope" of section 3001 was not as broad as EPA was interpreting it. Congress intended section 3004(x) to apply to those wastes within the scope of the Bevill amendment as Congress, not EPA, interpreted it (i.e., special wastes). EPA notes that the 1983 Senate Report referred to in the April NPRM supports this conclusion, but is not the sole basis for it.

In light of the decision of the Court of Appeals construing Congress' intent in adopting the Bevill amendment in 1980 (prior to the Simpson amendment), the proper reading of section 3004(x) is that it applies only to special wastes as defined by today's final rule. However, EPA does recognize that for certain wastes which are high volume, but also high hazard, there may be valid concerns regarding the amenability of certain subtitle C controls. EPA would appreciate receiving any information regarding these effects in industries affected by today's rule.

F. Administrative Issues

1. Subtitle C and Wastes Withdrawn From the Bevill Exclusion

Commenters recommended that the Agency clarify that surface impoundments managing processing wastes removed from the Bevill exclusion and exhibiting a hazardous characteristic will have four years, as provided for in section 3005(j)(6), to comply with the Minimum Technology Requirements (MTRs). These commenters were concerned that mineral processors newly subject to subtitle C would have to meet the MTRs under the LDR Program.

Other commenters recommended that the Agency impose subtitle C regulations on facilities that fail to properly close and secure units in accordance with all currently applicable requirements within the six month compliance period proposed in the NPRM. As an alternative, these commenters recommended that the Agency require affected facilities to implement a RCRA ground-water monitoring program to assure detection of threats to human health and the environment. Without assurance that no contamination was present, according to these commenters, Subtitle C closure and post-closure requirements must be met so as to characterize and remediate any potential human or environmental threats.

Section 3005(j)(6) provides that surface impoundments that become eligible for interim status after November 8, 1984 as a result of receiving wastes that are hazardous as a result of "additional listings or characteristics for the identification of hazardous waste under section 3001" must comply with MTRs within four years of promulgation of the new listing or characteristic. The wastes that are no longer subject to the Bevill exclusion are not being brought into the subtitle C system as a result of newly promulgated listings or characteristics, but EPA believes that the intended purpose of section 3005(j)(6) is to allow surface impoundments that are newly eligible for interim status after November 8, 1984 to have the same four years to close or retrofit afforded interim status impoundments in existence on November 8, 1984. Consequently, EPA believes that section 3005(j)(6) does apply to the impoundments receiving wastes newly brought into the subtitle C system as a result of today's action. EPA notes that it is adopting a similar construction of section 3004(g)(4) and thus is also viewing these wastes as newly identified for purposes of the land disposal restrictions program. In the event that there are inconsistencies between requirements under 3005(j)(6) and the land disposal restrictions program, they will be addressed by EPA when the Agency promulgates land ban requirements for these wastes.

2. Opportunities for Public Comment

In the April 17, 1989 NPRM, the Agency provided the public with a 45 day public comment period, during which time the Agency accepted written comments submitted to the Docket Information Center and held a public hearing in Washington, DC. Commenters asserted that by scheduling only one hearing location and date the public was denied full access to the public comment process. Other commenters argued that the public comment period was too short to allow the public adequate opportunity to review and comment on the NPRM. These commenters stated that an additional 30 days should have been allowed for public comment.

The Agency disagrees with these commenters. While the opportunities for public review and comment on the April 17, 1989 NPRM were more limited than the Agency customarily provides, the Agency believes that these opportunities were nonetheless adequate. Furthermore, the public review and comment schedule was driven by the Court-ordered schedule, which prevented the Agency from providing a longer public comment period or additional public hearings. In addition, for many issues, there have been multiple comment periods.

3. Executive Order 12291 Analysis

In the April 17, 1989 NPRM, the Agency explained that section 8 of Executive Order 12291 exempts an agency from the requirements of the Order when compliance would conflict with deadlines imposed by statute or judicial order. Accumulating the information and conducting the analyses required to fully comply with the requirements of sections 2 and 3 of Executive Order 12291 takes many months. Therefore, compliance with these requirements in preparation for the October and April proposed rules was not possible within the schedule specified by the Court for this rulemaking. In the NPRM, the Agency explained that although EPA could not conduct a complete economic impact analysis within the period of time allowed by the Court, the Agency's economic impact analyses conducted in support of previous Agency rulemaking and Report to Congress activities did suggest that the proposal might well not meet the criteria for a "major" rule.

Commenters argued that the Agency is in fact compelled to prepare an economic analysis for this rulemaking. These commenters asserted, without providing alternative analyses or information in support of the assertion, that the rule would qualify as a major rule under each of the three tests used to determine impact under Executive Order 12291. Some commenters argued that the Court clearly indicated that the Agency is required to consider costs and benefits in making Bevill decisions (see e.g., EDF I at 1315). Commenters recommended that if the Agency requires additional time to prepare an economic impact analysis, it should request an extension from the Court.

As discussed above and in the October and April proposals, the Agency does not have adequate time to prepare a complete RIA that is fully responsive to E.O. 12291 in connection with this rulemaking. Moreover, the Agency has not received convincing arguments or information that suggest that the rule, in either proposed form or in the form finalized today, would constitute a "major rule," at least not in terms of aggregate financial impacts in excess of $100 million annually. As far as any obligation to consider economic impact in making Bevill exclusion decisions is concerned, EPA's reading of the court decision in EDF I is that economic effects and all of the other RCRA 8002(p) study factors must be evaluated in the Report to Congress and considered in making the regulatory determination for Bevill mineral processing wastes, but not in identifying the mineral processing wastes that satisfy the Bevill criteria in the first instance. Finally, because EPA is capable of discharging its duties within the time period allotted by the Court, the Agency does not believe that a schedule extension for purposes of conducting an impact study that is not required is appropriate.

Commenters stated that the Agency does not have a basis for claiming that the rulemaking will not constitute a major rule, and therefore that the rule does require a Regulatory Impact Analysis. Sufficient information, according to commenters, was provided to the docket after the October 20, 1988 proposed rulemaking. These commenters stated that the Department of Interior (DOI) has indicated that it possesses the necessary data for conducting a Regulatory Impact Analysis.

EPA disagrees that the information that has been submitted to the docket demonstrates that this action constitutes a major rule. In fact, although the Agency had requested specific information in the October and April proposals regarding low volume processing wastes that would or might be affected by today's rule, virtually no specific data on such wastes was received in public comment on these proposals. Through past cooperative work with the U.S. Bureau of Mines (BOM), EPA is well aware of the types of information available from DOI concerning mineral processing wastes. While very comprehensive information on numbers and identities of facilities and production and sales volume data are available from BOM, the Bureau has very little information on other variables that are critical to a complete evaluation of regulatory and economic impact, such as waste types, volumes, and characteristics, and waste management practices.

The Agency has made a good faith effort to comply with the requirements of Executive Order 12291 by conducting a comprehensive economic impact screening analysis, as presented below in Section VIII.

4. Regulatory Flexibility Analysis

In the April 17, 1989 NPRM, the Agency explained that Section 608 of the Regulatory Flexibility Act (RFA) allows the Administrator to waive or delay completion of the RFA screening analysis in response to an emergency that makes compliance with the requirements of section 603 or the Act on a timely basis impracticable. In this instance, the court-imposed deadlines for publication of the October and April proposed rules have prevented EPA from conducting a complete screening analysis of potential small business impacts in time to support the rulemaking process, especially given that more than 100 mineral commodity sectors would have required screening for potentially hazardous waste and the presence of significantly affected small business entities. In both the October and April NPRMs the Agency solicited comment and specific information relating to specific small businesses or individual commodity sectors that produce ore or mineral processing wastes that could, by virtue of the potential hazardous characteristics of such wastes, be subject to adverse impacts by today's rule.

Commenters responded by stating that the Agency has inadequately evaluated the rule's impact on small businesses, but no commenters provided any specific information related to small business firms or potentially affected sectors. Nonetheless, these commenters stated that the Agency should recognize that enterprise ownership patterns vary appreciably between mineral-industry sectors, and therefore, the extension of information from the nonferrous and ferroalloy producing sectors to the nonmetallic ore and mineral processing sectors is inappropriate. These commenters asserted that the Bureau of Mines could provide information necessary to support a screening study.

In section IX of this preamble, the Agency presents a comprehensive analysis of the impacts of this rulemaking on small businesses.

G. Comments Addressing Nine Wastes for which Final Bevill Status is Established by Today's Rule

This section summarizes public comments received by EPA addressing nine potentially high volume wastes on which the Agency proposed to take final action in the April NPRM. EPA's decisions regarding the Bevill status of these materials are presented in section IV, below, though responses to a limited number of specific questions and issues raised by commenters are addressed in this section.

1. Slag From Primary Copper Processing

Several commenters supported EPA's proposal to retain primary copper smelting slag within the Bevill Amendment exclusion as a high volume, low hazard mineral processing waste. They noted that slag from primary copper smelting constitutes a low hazard waste according to a study supported by EPA. They further agreed that all types of copper processing slag (i.e., reverberator furnace, converter, and refining slag) should be aggregated to meet the volume criterion. One commenter stated that its anode and converter slag is not discarded but recycled to smelters and claimed this to be a standard practice at U.S. smelters. That same commenter noted that its reactor slag is an intermediate product that is processed in a slag concentrator using beneficiation activities (i.e., cooling, grinding, flotation) and that other facilities either discard or clean the slag. They claimed that water extract tests in which only one of 15 samples exceeded EP toxicity levels have demonstrated that the waste is low hazard.

Other commenters disagreed with EPA's proposal to retain copper slag. They indicated that the waste sampling effort conducted for the draft mineral processing waste Report to Congress revealed that one of the eleven samples of copper slag exhibited the EP toxicity characteristic. In addition, the waste contained elevated leachable levels of arsenic, cadmium, and lead. Water

extraction sampling also revealed that the waste contains leachable arsenic and cadmium at concentrations exceeding the EP trigger level. They noted that data from the draft Report to Congress demonstrate exceedances of the AWQC for copper smelting slag; cadmium exceeds the AWQC by up to 9,000 times, copper by up to 9,000 times, and lead by up to 15,000 times.

One commenter who in the past used copper slag for construction purposes in the state of Washington objected to the inclusion of slag from primary copper smelting, specifically objecting to the classification of copper smelting slag as nonhazardous. This commenter contended that contamination caused by copper smelting slag in the Tacoma, Washington area has been documented in numerous reports. In 1983, they claimed, the Tacoma Pierce County Health Department issued a notice advising against consumption of bottom fish from the Hylebos waterway and against regular consumption of fish from other waterways in the area because of the presence of arsenic and lead in fish caused in part by smelting slag.

EPA today finalizes the decision to leave copper slag within the exclusion for study. Data recently collected by EPA (using Method 1312) confirms that this waste passes the hazard screening criterion. Furthermore, 1310 data developed from the same sample fails to confirm the results cited by the commenter.

2. Slag From Primary Lead Processing

A commenter supported EPA's proposed retention of lead processing slag, but indicated a concern that only smelting and not refining slag may have been included. They requested that if this is EPA's position, that the Agency modify its definition to include refining slag.

Other commenters disagreed with EPA's proposal to include lead slag, arguing that slag from primary lead processing cannot be considered low hazard under any reasonable definition. They indicated that the waste sampling effort conducted for the draft mineral processing wastes Report to Congress revealed that all five of the plants generating this waste and thirteen of seventeen samples of slag from lead processing exhibited the EP toxicity characteristic. Two of the five facilities failed for cadmium; three of the five facilities and eight of the 17 total samples exceeded the drinking water standard for lead by more than 1000-fold; and one of the plants exceeded 100 times the drinking water standard for cadmium even when leached with water. All samples of granulated or hot dumped slag exhibited the EP toxicity characteristic; only the dezinced slag passed the characteristic test. They noted that data from the draft Report to Congress demonstrate exceedances of the AWQC for copper smelting slag; cadmium exceeds the AWQC by up to 8,000 times, zinc by up to 2,100 times, and lead by up to 68,000 times.

EPA today finalizes the decision to leave lead slag within the exclusion for study. Data recently collected by EPA (using Method 1312) confirms that this waste passes the hazard screening criterion at three facilities. The data cited by the commenters is not determinative of whether the waste will remain within the exclusion under today's screening criterion.

3. Red and Brown Muds from Primary Bauxite Processing

Commenters supported the Agency's proposed retention of red and brown muds from bauxite refining within the mining waste exclusion. They agreed that red and brown muds satisfy the definition of mineral processing and meet the low hazard and high volume criteria. The commenters further claimed that should red and brown muds incorrectly be classified as hazardous waste, a large share of the hazardous waste storage capacity in the U.S. would be consumed with no increased benefit or protection to the environment. One commenter further argued that this waste is from a mineral beneficiation, not mineral processing waste.

Red and brown muds are created by an alkaline digestion operation; they therefore constitute mineral processing wastes.

4. Phosphogypsum From Phosphoric Acid Production

A number of commenters supported EPA's proposal to retain phosphogypsum within the Bevill exclusion. They agreed that phosphogypsum meets the high volume and low hazard criteria and should be retained in the Bevill exclusion. Additionally, they contended that compliance with subtitle C requirements, including land disposal restrictions, in the management of phosphate rock is not possible. Where technologically feasible, compliance would require expenditures that cannot be sustained by the fertilizer industry. Several industry commenters claimed that the exclusion for phosphogypsum will be meaningless if the rainwater falling on these stacks also is not exempted, noting that the collection of this rainwater runoff is an integral part of the processing of phosphate rock as this processing could not legally occur if the runoff was not collected and managed in accordance with the NPDES program.

Commenters argued further that phosphogypsum should not be considered separately from the recirculating process water with which it is linked. Process water is used to convey phosphogypsum to management areas and serves a critical function in maintaining water balance. Water used to transport phosphogypsum is generated at a different point in the production process only where it is recirculated. The commenters asserted that separate consideration of phosphogypsum and process wastewater does not comport with the Agency's historical approach to the Bevill Amendment.

Other commenters, in contrast, criticized EPA's proposal to retain phosphogypsum from phosphoric acid production within the Bevill exclusion. They claimed that phosphogypsum, under any reasonable definition, is not low hazard. Of the 10 plants sampled in a study contracted by EPA, 14 of 19 samples exceeded 100 times the MCLs for alpha particle radioactivity, radium-226, or both. Furthermore, adequate data exist to document the health risks associated with radioactive uranium and phosphate wastes. They asserted that: (1) EPA data indicate that the health risks from phosphogypsum stacks and ponds exceed the Agency's acceptable levels by a factor of eight, (2) phosphogypsum piles are located in areas of heavy rainfall where leaching of wastes occurs, and (3) the piles are located in heavily populated areas and in close proximity to ground water. Therefore, they contended, phosphogypsum should be regulated as a hazardous waste. EPA's failure to consider radionuclides as hazard is arbitrary, especially since EPA has previously recognized that waste with 20pCi/g constitutes more than a low level hazard and the EPA Draft Background Information Document entitled "Radionuclide Emissions from Phosphogypsum Stacks-Risk Assessment" shows phosphogypsum to have an average radium 226 concentration of 31 pCi/g, plus significant levels of other radionuclides. The commenters also expressed concern over the disposal of phosphogypsum filter pan residue on these piles as the residue has concentrations of radionuclide 2 to 3 orders of magnitude higher than normal phosphogypsum.

EPA has reviewed these comments and has elected to retain phosphogypsum within the Bevill

exclusion because it passes all of the final Bevill mineral processing wastes criteria. The type(s) and magnitude of risk posed by this material, including its radioactive constituents, will be addressed in the forthcoming Report to Congress.

The Agency also wishes to reiterate its position regarding the definition of phosphogypsum, as articulated in the April NPRM. Phosphogypsum and the process water that is used to remove it to disposal represent two separate waste streams that could, if the industry desired, be managed separately. The Agency understands that when the phosphogypsum waste stream leaves the mineral processing circuit it is not entrained in the process water, but is a semi-solid residue from a filtering operation. The solid waste is *then* entrained in the process water in order to transport the waste to gypsum stacks for disposal. While alternative transport systems may be impractical, the fact remains that there exist two waste streams capable of being managed separately which must be considered separately for this rulemaking. Therefore, only phosphogypsum will be unconditionally retained within the Bevill exclusion for today's ruling.

EPA will address the status of process wastewater from phosphoric acid production, including its components (i.e., the gypsum stack run-off issue) in the September, 1989 proposal.

5. Slag From Elemental Phosphorus Production

Commenters supported EPA's proposal to retain slag from elemental phosphorus production within the Bevill Amendment. They claimed that phosphorus industry materials streams are generated by "mineral processing" operations as defined by the EPA, are high volume wastes, and are not high hazard wastes.

6. Furnace Scrubber Blowdown From Elemental Phosphorus Production

Some commenters supported EPA's proposal to retain furnace scrubber blowdown from elemental phosphorus production within the Bevill Amendment. They claimed that phosphorus industry materials streams are generated by "mineral processing" operations as defined by the EPA, are high volume wastes, and are not high hazard wastes.

Other commenters objected to including furnace scrubber blowdown within the Bevill exclusion. They contended that furnace scrubber blowdown from phosphorus production cannot be considered low hazard under any reasonable definition. Of the two plants sampled in a study contracted by EPA, both plants yielded samples that exceeded 100 times the MCLs for alpha particle radioactivity, radium-226, or both. One plant exceeded the EP standard for cadmium, while the other exceeded the MCL for arsenic by more than 10-fold, and exceeded the 10–5 cancer risk level by almost 850 fold.

7. Acid Plant and Scrubber Blowdown from Primary Copper Processing

Several commenters argued that acid plant blowdown and Lurgi scrubber effluent should be retained in the Bevill exclusion because they meet both the high volume and, at least at some facilities, the low hazard criteria. One commenter asserted that acid plant and scrubber blowdown from primary copper processing should not be eliminated from the Bevill Amendment based on its failure of EPA's low hazard test. They stated that the Agency should consider the burden of compliance for sectors eliminated from the Bevill exclusion. The commenter that claimed to have a low hazard waste stated that: (1) Their alkaline tailings are mixed with the waste which neutralizes the blowdown/Lurgi mixture, and (2) metals in the waste, by operation of internal chemical processes, become tightly bound in the matrices of various complex hydroxides contained in the tailings in which they are mixed, thus producing a minimal risk of leaching. Therefore, the representative samples of the Lurgi/blowdown/tailings mixture are not EP toxic. Additionally, they contended that the mixture poses no threat of release into the environment because the waste is deposited in a tailings pond on a deep tailings base which serves as an effective seal from migration into soil or groundwater, the waste is deposited a great distance from drinking water, and the commenter's facilities are located in an arid, unpopulated region.

Other commenters agreed with EPA's proposal to remove acid plant and scrubber blowdown from primary copper processing from the Bevill exclusion, arguing that blowdown from primary copper processing cannot be considered low hazard under any reasonable definition. They noted that the waste sampling effort conducted for the draft Report to Congress revealed that all samples of copper acid plant blowdown exhibited the EP toxicity characteristic. In addition, they indicated that the waste contained elevated leachable levels of arsenic, cadmium, and mercury, and that the acid plant blowdown samples exceeded EP characteristic trigger levels; the mercury concentrations exceeded by up to 99.5 times, and the cadmium concentrations exceeded by a factor as high as 24.5. They also noted that water extraction sampling also revealed that the waste contains leachable arsenic and cadmium at concentrations exceeding the EP trigger level. They contended that data from the Draft Report to Congress demonstrate exceedances of the AWQC for copper smelting slag: cadmium exceeds the AWQC by up to 25,000 times, arsenic by up to 1,930 times, and mercury by up to 30,000 times.

8. Acid Plant Blowdown from Primary Lead Processing

One commenter contended that acid plant blowdown from primary lead processing should not be eliminated from the Bevill Amendment based on its failure of EPA's low hazard test. The commenter maintained that lead processing acid plant blowdown and scrubber blowdown fall within the definition of process wastewaters and meet the high volume criterion; therefore, the waste should be studied.

9. Air Pollution Control Scrubber Blowdown from Primary Tin Processing

The single tin processor in the U.S. submitted in response to the October NPRM that it generated on average 68,000 metric tons of blowdown, which they claimed is a relatively dilute stream in the neutral pH range, and is similar to smelters in the lead and copper smelters. No comments were received in response to the April NPRM.

EPA need not address in detail the comments on the hazard status of phosphorous furnace scrubber blowdown and acid plant blowdown from copper, lead, and tin. These liquid wastes all fail the volume criterion.

III. Final Criteria for Defining Bevill Mineral Processing Wastes

A. Definition of Mineral Processing Wastes

For purposes of this rule, mineral processing wastes are generated by operations downstream of beneficiation (as codified by today's rule) and originate from a mineral processing operation as defined by the following elements:

(1) Excluded Bevill wastes must be solid wastes as defined by EPA.

(2) Excluded solid wastes must be uniquely associated with mineral industry operations.

(3) Excluded solid wastes must originate from mineral processing operations that possess all of the following attributes:

a. Follow beneficiation of an ore or mineral (if applicable);

b. Serve to remove the desired product from an ore or mineral, or from a beneficiated ore or mineral, or enhance the characteristics of ores or minerals, or beneficiated ores or minerals;

c. Use mineral-value feedstocks that are comprised of less than 50 percent scrap materials;

d. Produce either a final mineral product or an intermediate to the final product; and

e. Do not combine the product with another material that is not an ore or mineral, or beneficiated ore or mineral (e.g., alloying), do not involve fabrication or other manufacturing activities, and do not involve further processing of a marketable product of mineral processing.

(4) Residuals from treatment of excluded mineral processing wastes must be historically or presently generated and must meet the high volume and low hazard criteria in order to retain excluded status.

Beneficiation operations include crushing, grinding, washing, dissolution, crystallization, filtration, sorting, sizing, drying, sintering, pelletizing, briquetting, calcining, roasting in preparation for leaching (to produce a final or intermediate product that does not undergo further beneficiation or processing), gravity concentration, magnetic separation, electrostatic separation, flotation, ion exchange, solvent extraction, electrowinning, precipitation, amalgamation, and heap, dump, vat, tank, and *in situ* leaching.

Processing operations generally follow beneficiation and include techniques that often destroy the ore or mineral, such as smelting, electrolytic refining, and acid attack or digestion. EPA also wishes to emphasize that operations following the initial "processing" step in the production sequence are also considered processing operations, irrespective of whether they involve only the techniques defined above as beneficiation. Therefore, solid wastes arising from such operations are considered mineral processing wastes, rather than beneficiation wastes.

B. The High Volume Criterion

High volume mineral processing wastes are defined as (1) non-liquid mineral processing wastes that were generated at an average annual rate of greater than 45,000 metric tons per year per facility, and (2) liquid mineral processing wastes that were generated at an average annual rate of more than 1,000,000 metric tons per year per facility during any year between 1983 and 1988.

For the purposes of this rulemaking, the volume criterion for non-liquids has been and will be used to determine if both solid (e.g., slag, phosphogypsum) and semi-solid (e.g., waste treatment sludge) materials are high volume. The volume criterion for liquids has been used to determine whether wastewaters and other aqueous wastes are high volume. Professional judgment will be employed in deciding which criterion to apply to a particular waste stream. The Agency considered the possibility of using a quantitative measure, such as percent solids, to distinguish between liquid and non-liquid materials, but concluded that such an approach would lead to results that are inconsistent with the purpose of employing separate criteria for defining large volume liquid and large volume non-liquid wastes. Specifically, the solids content of some liquid wastes generated by mineral processing operations may be higher than the solids content of some sludges resulting from the treatment of other mineral processing wastes, in spite of the fact that a major volume reduction operation (such as settling) has yet to be performed on the untreated liquid waste. Therefore, use of quantitative criteria might result in inappropriately considering a waste that has a solids content above the cut-off but for which additional volume reduction is likely (such as may occur as a result of treatment and discharge of wastewater), to be large volume, or vice versa.

The final volumetric cut-offs presented here reflect some of the largest quantities of individual and identifiable waste streams managed at facilities that are currently in the Subtitle C regulatory system. EPA developed the information supporting these cut-offs in direct response to comments reflecting both sides of this issue criticizing the Agency's less complete justification of the volume criterion cut-off values contained in the October and April proposals. For each facility responding to EPA's TSDR Survey (discussed above), the Agency first determined whether they operated an on-site hazardous waste landfill or on-site hazardous wastewater management units (wastewater treatment systems, treatment tanks, surface impoundments, or underground injection wells). Data pertaining to landfill disposal were used to develop the criterion for non-liquids and data regarding wastewater management units were used to derive the criterion for liquids. Because mineral processing wastes are typically inorganic, any solid/sludge materials that are solid wastes and are not recycled and might be regulated under subtitle C would have to be disposed in a subtitle C landfill. Therefore, establishing a volume criterion for these materials requires analysis of hazardous waste disposal in subtitle C landfills. Similarly, because liquid mineral processing wastes are generally aqueous and thus may be managed using one or more of several different techniques, EPA analyzed all of the significant technologies employed to manage hazardous wastewater under subtitle C. In both cases, the Agency identified the largest individual waste stream managed by an appropriate technique at each facility (i.e., one hazardous waste stream per facility), then computed univariate statistics on the resulting distribution. (This is the same basic approach used by certain commenters who proposed volume cut-offs utilizing data from EPA's 1985 Biennial Survey.) The final volumetric criteria represent approximately the largest individual waste stream managed by the facility at the 95th percentile of the relevant distribution. Relevant data are presented in Table 1. The Agency believes that the 95th percentile of the largest individual waste stream managed at each facility both provides a meaningful measure of the amenability of subtitle C controls to different waste types, and represents a reasonable overlap between Subtitle C wastes and Bevill wastes. EPA also notes that this value is a compromise between commenters that favored using the 99th percentile and those that favored the 90th percentile.

TABLE1.[1]—UNIVARIATE STATISTICS ON SOLID AND LIQUID HAZARDOUS WASTES

[All quantities in metric tons managed in 1986]

	Solids	Wastewaters
Percentile:		
100	194,319	44,307,857
99	77,443 or 194,319 [2]	4,589,261 or 4,999,573
95	41,540 or 46,192	1,098,412 or 1,112,680
90	31,505 or 31,746	348,230 or 358,224
75	10,072 or 10,815	49,039 or 49,105
Number of facilities	88	964

[1] For a detailed discussion of the derivation of these data, see the docket for this rulemaking.
[2] The two different numbers reflect results using two different and equally valid techniques for computing univariate statistics. Large differences indicate significant uncertainty with respect to that portion of the distribution.

The Agency believes that by developing the final volume criterion in this manner, it has resolved all of the significant issues raised in public comment on the high volume criterion presented in the two proposed rules. First, the basis of comparison (recent Subtitle C waste management) is the most relevant to addressing the question at hand (amenability to Subtitle C controls). Second, the way in which the comparison was developed is more internally consistent than in the previous analysis; EPA developed a criterion from data on hazardous waste management of individual waste streams and will apply this criterion to individual mineral processing waste streams. Third, the two separate criteria that are presented here reflect the highly significant differences in treatment processes and treatment residuals management options that exist between nonliquid and liquid wastes. As stated in the April NPRM, it is more technically feasible to manage large volumes of wastewater than it is to manage large volumes of solids, because wastewater treatment effluent (by far the largest treatment residue in most cases) can typically be discharged or recycled while solids must often be land-disposed. Finally, in developing this approach, EPA has reconsidered its earlier position and included commercial hazardous waste management facilities in the database used to develop the cut-offs for the final high volume criterion, because the issue at hand is technical feasibility of Subtitle C waste management; considerations of differential economic incentives facing operators of commercial and private hazardous waste management facilities are not relevant in resolving this issue. Therefore, the Agency selected a volume criterion of 45,000 metric tons per year per facility for non-liquid mineral processing wastes and 1,000,000 metric tons per year per facility for liquid mineral processing wastes to correspond to approximately the 95th percentile (and rounded off so that the criterion could be easily expressed; the rounding had no effect on any waste stream's status).

C. The Low Hazard Criterion

1. The Toxicity and Mobility Test

A high volume mineral processing waste is not low hazard and, therefore, is not eligible for the temporary exclusion from Subtitle C requirements provided by the Bevill Amendment if:

- Available data indicate that waste extracts obtained using EPA Method 1312 and analyzed using established SW–846 methods contain concentrations of arsenic, barium, cadmium, chromium, lead, mercury, selenium or silver that exceed 100 times the MCL for the constituent at two or more facilities that generate the waste, unless:

i. The waste is generated at five or more facilities; and

ii. Substantial additional relevant data are available and the preponderance of these additional data indicate that the waste should be considered low hazard, where:

a. Relevant data are defined as data that result from analysis of waste extracts obtained by EPA Methods 1310, 1311, and 1312, ASTM Test Method D3987–81, or comparable procedures that the Agency has reason to believe produce reliable and representative data; and

b. To be considered substantial, the additional data must characterize the waste at 3 plants (other than those two plants where Method 1312 results exceed 100 times the MCLs) *or* at least half of the facilities that generate the waste (other than those two plants where Method 1312 results exceed 100 times the MCLs), whichever number of plants is larger.

- Constituent concentrations measured in waste sample extracts obtained using Method 1312 are used to determine facility-level values as follows:

i. If data for only one sample of the waste are available, then these data determine the facility-level constituent concentrations; and

ii. If data on two or more samples are available, then the lower bound of the 80 percent confidence interval of the mean of the data [7] serves as the facility-level constituent concentrations, where the confidence interval is calculated for each waste for each constituent using all results (from all plants generating the waste) available from testing of the waste using Method 1312.

This criterion is more complicated than the low hazard criterion proposed in April in two respects: (1) It requires that the 80 percent confidence interval for the mean be calculated for each constituent and each waste type; and (2) It requires consideration of data other than Method 1312 results, including data based on Method 1310 and 1311 that were provided in public comments or in response to the mineral processing waste survey or the "3007 letter" request for waste characteristics information.

Nonetheless, EPA believes that these modifications are appropriate because they allow EPA to make use of data that the Agency specifically requested that industry provide, while avoiding biases inherent in other alternatives for including these data. Moreover, the revised low hazard criterion is directly responsive to commenters who indicated that it was inappropriate, i.e., inconsistent with the spirit of the Bevill exclusion, for a screening criterion to remove the exclusion from a waste that "fails" the low hazard criterion at two facilities while "passing" the criterion at many more other facilities.

[7] The 80 percent confidence interval is recommended (guidance) in chapter 9 on sampling in SW–846 as the confidence interval to be used for evaluating whether wastes pass or fail regulatory thresholds. Because the low hazard criterion is being used as a screening test to remove wastes that are clearly not low hazard from the Bevill exclusion, EPA is comparing the lower bound of the 80 percent confidence interval with the relevant standards.

2. The pH Test

A high volume mineral processing waste is not low hazard and, therefore, is not eligible for the temporary exclusion from Subtitle C requirements provided by the Bevill Amendment if:

• Fewer than five facilities generate the waste and the pH (determined as required by 40 CFR 261.22) is less than one (1) or greater than 13.5 at two or more facilities that generate the waste, or if five or more facilities generate the waste and the pH is less than one (1) or greater than 13.5 at 50 percent or more of the facilities that generate the waste.

• pH values measured for waste samples are used to determine facility-level values for individual candidate low hazard wastes as follows:

i. If a datum for only one sample from a facility is available, this datum determines the facility-level pH; and

ii. If data on two samples from a facility are available, the lower value determines the facility-level pH; and

iii. If data on more than two samples from a facility are available, the median value defines the facility-level pH.

The changes to the pH test from the April NPRM (i.e., the protocol for considering additional data) were made for the same reasons as discussed above with respect to the toxicity and mobility test.

IV. Final Bevill Status of Selected Mineral Processing Wastes

The present status of all candidate Bevill mineral processing wastes that were proposed either for retention within or removal from the exclusion in either the October or April proposals is presented in Table 2.

TABLE 2.—CURRENT STATUS OF PREVIOUSLY PROPOSED CANDIDATE BEVILL MINERAL PROCESSING WASTES

Commodity sector	Waste stream	Status	Reason for Bevill Status
Bauxite	Red and Brown Muds	Retained	Passes all Bevill Criteria.
Beryllium	Barren Filtrate	Removed	Low Volume.
	Bertrandite Thickener Slurry	Subtitle D+ Program	Reclassified as Beneficiation.
	Processing Raffinate	Removed	Low Volume.
Cerium	Process Water	Removed	Low Volume.
Chromite	Roast/Leach Ore Residue	Conditionally Retained	Passes High Volume.
Coal Gas	Cooling Tower Blowdown	Removed	Low Volume.
	Gasifier Ash	Conditionally Retained	Passes High Volume.
	Process Wastewater	Conditionally Retained	Passes High Volume.
Copper	Acid Plant Scrubber Blowdown	Removed	Low Volume.
	Bleed Electrolyte	Removed	Low Volume.
	Calcium Sulfate Sludge from WWT	Conditionally Retained	Passes High Volume.
	Process Wastewater	Removed	Low Volume.
	Slag	Retained	Passes all Criteria.
	Slag Tailings	Conditionally Retained	Passes High Volume.
Elemental Phosphorus	Furnace Off-Gas Solids	Conditionally Retained	Passes High Volume.
	Furnace Scrubber Blowdown	Removed	Low Volume.
	Process Wastewater	Removed	Low Volume.
	Slag	Retained	Passes all Criteria.
Hydrofluoric Acid	Fluorogypsum	Conditionally Retained	Passes High Volume.
	Process Wastewater	Conditionally Retained	Passes High Volume.
Iron	APC Dust/Slurry from Blast Furnaces	Conditionally Retained	Passes High Volume.
	Blast Furnace Slag	Conditionally Retained	Passes High Volume.
Lanthanides	Ammonium Nitrate Process Solution	Removed	Low Volume.
Lead	Acid Plant Blowdown	Removed	Low Volume.
	Process Wastewater	Conditionally Retained	Passes High Volume.
	Slag	Retained	Passes all Criteria.
Lightweight Aggregate	APC Dust/Sludge	Conditionally Retained	Passes High Volume.
	Scrubber Wastewater	Removed	Low Volume.
Magnesium	Wastewater from the Anhydrous Process	Conditionally Retained	Passes High Volume.
Molybdenum	Selenium Pl. Effluent from Processing APB	Removed	Low Volume.
Phosphoric Acid	Phosphogypsum	Retained	Passes all Criteria.
	Process Wastewater	Conditionally Retained	Passes High Volume.
Soda Ash	Wastes from Trona Ore Processing	Subtitle D+ Program	Reclassified as Beneficiation.
Steel	Steel (BOF and OHF) APC Dust/Sludge	Conditionally Retained	Passes High Volume.
	Steel (BOF and OHF) Slag	Conditionally Retained	Passes High Volume.
Tin	Air Pollution Control Scrubber Blowdown	Removed	Low Volume.
Titanium	Chloride Processing Waste Acids	Removed	Low Volume.
	Chloride Processing Waste Solids	Conditionally Retained	Passes High Volume.
	Leach Liquor	Removed	Low Volume.
	Sulfate Processing Waste Acids	Conditionally Retained	Passes High Volume.
	Sulfate Processing Waste Solids	Conditionally Retained	Passes High Volume.
Zinc	Acid Plant Blowdown	Removed	Low Volume.
	Process Wastewater	Removed	Low Volume.
	Zinc-Lean Slag	Conditionally Retained	Passes High Volume.

For today's final rule, EPA has applied the criteria described above to all waste streams for which it has sufficient information to make regulatory decisions. The data supporting these decisions were provided in the October and April proposals. Based upon these data and new sampling and analysis results (Method 1312) which may be found in the docket for today's rule, the following five wastes are retained within the Bevill exclusion:

1. Slag from primary copper smelting;

2. Slag from primary lead smelting;

3. Red and brown muds from primary bauxite refining;

4. Phosphogypsum from phosphoric acid production; and

5. Slag from elemental phosphorus production.

EPA has determined that each of these materials meets the definition of a waste from mineral processing operations, is generated at an annual

rate exceeding the relevant final volume criterion (45,000 metric tons per year per facility for nonliquid wastes) and passes the final low hazard criterion (i.e., does not fail the toxicity and mobility or pH tests at two or more facilities).

Twenty wastes are conditionally retained within Bevill because they appear, based upon currently available data, to meet the final high volume criterion; the data needed to implement the low hazard criterion for these wastes, however, is currently unavailable. Most of these wastes were proposed for conditional exclusion in the April proposal. Two wastes (process wastewater from hydrofluoric acid production, and APC dust/slurry from carbon steel (open hearth and basic oxygen furnace) production) have been added because of information received in public comment on the April notice, as interpreted by best professional judgment.

Eighteen specific wastes proposed either for conditional retention or for removal on the basis of hazard, in addition to the list of small volume wastes provided in the April NPRM (see 54 FR 15343–4) (or any other small volume or speculative wastes, whether or not nominated for conditional exclusion), are hereby removed from the Bevill exclusion. All are liquid wastes that are generated in quantities well under the final one million metric ton per year per facility cut-off, based upon available EPA data and data submitted to the Agency in public comment.

Finally, a small number of wastes that EPA either proposed for retention in April or were nominated in public comment on the October or April proposals have been reclassified as beneficiation wastes, and hence will be addressed by the RCRA subtitle D program for mineral extraction and beneficiation wastes that EPA is currently developing. These include, but are not limited to, wastes from trona ore processing and bertrandite thickener slurry from primary beryllium production (both proposed in April), and sulfate leach ore residue from primary copper production (nominated by a commenter on the April NPRM).

V. Schedule for Final Resolution of Bevill Status for All Remaining Candidate Bevill Mineral Processing Wastes

As discussed above, the Bevill status of all potential high volume, low hazard mineral processing wastes will be proposed by EPA by September 15, 1989. Following receipt and analysis of public comments on these proposed exclusion decisions, the Agency will articulate final action on each candidate Bevill waste in a final rule by January 15, 1990. At this time, the universe of Bevill-excluded mineral processing wastes will be established, and no additional wastes will be added.

Today's final rule includes a revised list of conditionally retained wastes (see Table 2, above). Modifications to this list, which was originally published in the April NPRM, have been made to reflect new information received in public comment on the April notice, and professional judgment in applying the final Bevill mineral processing wastes criteria to EPA's data on the specific mineral production operations that generate candidate Bevill wastes and on waste generation rates. Some of the wastes designated today as being conditionally retained wastes may be proposed for removal from the Bevill exclusion in September if the survey and/or waste sampling and analysis data that the Agency is currently collecting indicate that they do not pass both the high volume and low hazard criteria. In no event, however, will additional mineral processing wastes be considered for retention within the Bevill exclusion.

VI. Regulatory Implementation and Effective Dates of the Final Rule

As of the effective date of this final rule, mineral processing wastes that have been temporarily excluded from regulation under subtitle C of RCRA since 1980, except the 25 "special wastes" described above, may now be subject to subtitle C requirements beginning in February 1990 (i.e., six months after this notice appears in the Federal Register) in those states that do not have authorization to administer their own hazardous wastes program in lieu of EPA. Generators, transporters, and TSD facilities in authorized states will be subject to RCRA requirements imposed as a result of this rule only after the state revises its program to adopt equivalent requirements and EPA authorizes the revision. The requirements imposed as a result of removing the temporary exclusion include: determining whether the solid waste(s) exhibit hazardous characteristics (40 CFR 262.11); obtaining an EPA identification number for managing hazardous wastes (40 CFR 262.34); complying with recordkeeping and reporting requirements (40 CFR 262.40–262.43); and obtaining interim status and seeking a permit (or modifying interim status, including permit applications or modifying a permit, as appropriate) (40 CFR part 270).

A. Section 3010 Notification

Not later than November 30, 1989, all persons who generate, transport, treat, store, or dispose of wastes removed from temporary exclusion by this rule and which are characteristically hazardous under 40 CFR part 261, subpart C, will be required to notify either EPA or an authorized State of these activities pursuant to section 3010 of RCRA. Notification instructions are set forth in 45 FR 12746, February 26, 1980. Persons who previously have notified EPA or an authorized State of their activities pursuant to section 3010 of RCRA, i.e., persons who previously have notified EPA or an authorized state that they generate, transport, treat, store or dispose of hazardous waste and have received an identification number (see 40 CFR 262.12, 263.11 and 265.1) need not re-notify.[8] Persons without EPA identification numbers are prohibited from generating, transporting, treating, storing, or disposing of hazardous wastes.

The Agency views the section 3010 notification requirements to be necessary in this case because it believes that many persons that manage the wastes coming into subtitle C regulation today have not previously notified EPA and received an EPA identification number.

B. Compliance Dates

1. Interim Status in Unauthorized States

Facilities that currently treat, store, or dispose of the wastes removed from temporary exclusion of this rule, and are characteristically hazardous under 40 CFR part 261, subpart C, but have not received a permit pursuant to section 3005 of RCRA and are not operating pursuant to interim status, may be eligible for interim status under HSWA (see section 3005(e)(1)(A)(ii) of RCRA, as amended). In order to operate pursuant to interim status, such facilities must submit a section 3010 notice pursuant to 40 CFR 270.70(a) by November 30, 1989, and must submit a part A permit application by March 1, 1990. Under section 3005(e)(3), land disposal facilities qualifying for interim status under section 3005(e)(1)(A)(ii) must also submit a part B application and certify that the facility is in compliance with all applicable ground water monitoring and financial responsibility requirements by March 1,

[8] Under the Solid Waste Disposal Amendments of 1980 (Pub. L. 96-482), EPA was given the option of waiving the notification requirement under section 3010 of RCRA following revision of the section 3001 regulations, at the discretion of the Administrator.

1991. If the facility fails to do so, interim status will terminate on that date.

Completion of final permit application will require individual facilities to develop and compile information on their on-site waste management operations including, but not limited to the following activities: ground-water monitoring (if waste management on land is involved); manifest systems, recordkeeping, and reporting; closure, and possibly, post-closure requirements; and financial responsibility requirements. The permit applications may also require development of engineering plans to upgrade existing facilities. In addition, many of these facilities will, in the future, be subject to land disposal restrictions (LDR) standards. EPA plans to promulgate LDR standards for all characteristic hazardous wastes by May 8, 1990. Under EPA regulations, these standards must require treatment of the affected wastes to a level or by a method that reflects the use of Best Demonstrated Available Technology (BDAT) before the wastes can be disposed on the land. Thus, one future implication of today's final rule will be the ban on land disposal of these wastes unless they are appropriately treated prior to such disposal. (See discussions of the LDR as related to these wastes for further details).

All existing hazardous waste management facilities (as defined in 40 CFR 270.2) that treat, store, or dispose of hazardous wastes covered by today's rule, and that are currently operating pursuant to interim status under section 3005(e) of RCRA, must file with EPA an amended part A permit application by March 1, 1990, in accordance with § 270.72(a).

Under current regulations, a hazardous waste management facility that has received a permit pursuant to section 3005 may not treat, store, or dispose of the wastes removed from temporary exclusion by today's rule and which are characteristically hazardous under 40 CFR part 261, subpart C, when the rule becomes effective on March 1, 1990, until a permit modification allowing such activity has occurred in accordance with § 270.42. EPA has recently amended its permit modification procedures for newly listed or identified wastes. For more details on the permit modification procedures, see 53 FR 37912.

2. Interim Status in Authorized States

Until the State is authorized to regulate the wastes excluded from temporary exclusion by today's rule and which are hazardous under 40 CFR part 261, subpart C, no permit requirements apply and facilities lacking a permit need not seek interim status. Any facility treating, storing, or disposing of these wastes on or before the effective date of authorization of the State to regulate these wastes under RCRA may qualify for interim status under applicable State law. Note that in order to be no less stringent than the Federal program, the State "in existence" date for determining interim status eligibility may not be after the effective date of EPA's authorization of the State to regulate these wastes. These facilities must also provide the required 3010 notification as described above and must also provide the State's equivalent of a part A permit application as required by authorized State law.

Finally, RCRA section 3005(e)(3) or any authorized State analog will apply to land disposal facilities qualifying for State interim status.

VII. Effect on State Authorizations

This final rule is not effective in authorized States, because its requirements are not being imposed pursuant to the Hazardous and Solid Waste Amendments of 1984. Thus, this removal from temporary exclusion is applicable on March 1, 1990, only in those few States that do not have final authorization to operate their own hazardous waste programs in lieu of the Federal program. In authorized States, the reinterpretation of the regulation of non-excluded processing wastes will not be applicable until the State revises its program to adopt equivalent requirements under State law and receives authorization for these new requirements. (Of course, the requirements will be applicable as a State law if the State law is effective prior to authorization).

States that have final authorization are required (40 CFR 271.21(e)) to revise their programs to adopt equivalent standards regulating non-Bevill mineral processing wastes that exhibit hazardous characteristics as hazardous by July 1, 1991, if only regulatory changes are necessary, or by July 1, 1992, if statutory changes are necessary. These deadlines can be extended by up to six months (i.e., until January 1, 1992, and January 1, 1993, respectively) in exceptional cases (40 CFR 271.21(e)(3)). Once EPA approves the revision, the State requirements become RCRA subtitle C RCRA requirements in that State. States are not authorized to carry out any regulations providing coverage similar to today's proposed rule as RCRA requirements until such regulations (or modifications to regulations) are submitted to EPA and approved. Of course, States with existing standards may continue to administer and enforce them as a matter of law.

States that submit an official application for final authorization less than 12 months after the effective date of the reinterpretation may be approved without including an equivalent provision (i.e., to address non-Bevill mineral processing wastes) in the application. However, once authorized, a State must revise its program to include an equivalent provision according to the requirements and deadlines provided at 40 CFR 271.21(e).

VIII. Economic Impact Screening Analysis Pursuant to Executive Order 12291

Sections 2 and 3 of Executive Order 12291 (46 FR 13193) require that a regulatory agency determine whether a new regulation will be "major" and, if so, that a Regulatory Impact Analysis (RIA) be conducted. A major rule is defined as a regulation which is likely to result in:

(1) An annual effect on the economy of $100 million or more;

(2) A major increase in costs or prices for consumers, individuals, industries, Federal, State, and local government agencies, or geographic regions; or

(3) Significant adverse effects 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.

Section 8 of Executive Order 12291 exempts an agency from the requirements of the order when compliance would conflict with deadlines imposed by statute or judicial order. As noted in the Preamble to the NPRM for this rule last April (54 FR 15345), time constraints imposed by court-ordered deadlines for publication did not allow the Agency to complete a comprehensive preliminary analysis to evaluate potential economic costs and impacts. At that time, the Agency summarized results from previous work and indicated that, although a complete RIA would not be feasible due to time limitations, additional analysis of costs and impacts would be conducted to evaluate whether this should be considered a major rule. This section of today's preamble summarizes EPA's subsequent screening-level economic impact study.

Today's final rule removes the Bevill exclusion from all smaller volume wastes (less than 45,000 metric tons per year for non-liquid wastes and 1,000,000 metric tons per year for liquid wastes) and high volume wastes that are clearly

not low hazard (based on currently available data) at ore and mineral processing facilities. Therefore, the impacts of today's rule fall within any metal or non-metal commodity sectors generating such waste streams from mineral processing operations, but only to the extent that these wastes exhibit the characteristic tests for hazardous wastes under subtitle C of RCRA.

EPA's impact assessment indicates that today's rule is not a major rule (at least according to criterion 1, above), in that preliminary screening-level estimates place the total annual costs of compliance at about $53 million per year. Because this is a screening level analysis, however, the level and distribution of impacts is uncertain. It does appear that a few individual mineral commodity sectors or processing technologies could incur annual costs in the range of one to seven percent of their annual value of shipments (sales). These sectors or technologies, though few in number and small in total value of shipments relative to the 101 commodity sectors reviewed in the study, could be said to incur moderate to substantial impacts. Overall, however, with respect to the mineral industry as a whole or the portion of the industry that performs "mineral processing" in particular, the Agency believes, on the basis of its screening analysis, that today's rule does not constitute a major rule within the context of E.O. 12291.

A. General Approach to Compliance Cost Estimation

The purpose of this analysis was to assess the general level of costs and resultant economic impacts arising from the imposition of current subtitle C requirements on smaller volume mineral processing wastes and high volume wastes that are not low hazard that were previously exempt under the Bevill Amendment. As noted above, a complete and detailed examination of the costs and potential impacts of today's rule was not possible given the Court-ordered schedule prompting this rulemaking. The Agency has, however, undertaken a comprehensive screening-level review of all sectors that could be affected directly by today's rule.

EPA's economic screening methodology consisted of a number of straightforward steps designed to (1) identify and describe all mineral processing sectors, (2) characterize and determine the approximate quantities of relevant waste streams, and (3) estimate the subtitle C compliance costs for all sectors generating potentially hazardous wastes. This section briefly describes the approaches and information sources used to develop these preliminary cost estimates. The following two sections describe the cost estimates and discuss impacts on affected sectors. Additional information concerning the techniques, assumptions, and data sources used in this analysis may be found in a technical background document in the docket for today's rule.[9]

1. Processing Sector Identification

The starting point for the analysis was to identify mineral industry commodity sectors that conduct mineral processing operations within the definition of today's rule. Obviously, facilities in sectors that do not employ such operations will not experience any economic impacts. Working with the U.S. Bureau of Mines, the Agency identified a total of 101 differentiable mineral commodity sectors for initial review. Those specific sectors that employ mineral processing operations were identified by intensive contact with commodity and technical specialists at the U.S. Bureau of Mines, and by consulting outside mineral industry experts particularly knowledgeable of specific industry production techniques and waste management practices. Of the 101 initial sectors, 43 were identified as domestic mineral commodity processing sectors subject to further analysis and review of waste stream characteristics. Of the 58 remaining sectors, 51 commodity sectors were screened out as not conducting processing (i.e., their finished product resulted directly from beneficiation activities). The commodities produced domestically using extraction and beneficiation operations exclusively are listed in appendix A. An additional 7 mineral commodities are not currently processed in the United States. These include arsenic trioxide, cobalt, gallium, graphite, indium, nickel, and thallium.

It is highly noteworthy that the vast majority of mineral commodities listed in appendix A are non-metallic and that only nine of the 43 domestic sectors conducting mineral processing operations produce non-metallic commodities. Thus, the first conclusion that EPA may draw from this screening analysis is that the results from previous cost and impact studies focusing on metallic ore processing sectors are not likely to dramatically underestimate total regulatory compliance costs associated with this rule, as some commenters have persistently claimed.

[9] USEPA. "Technical Background Document: Development of the Cost, Economic, and Small Business Impacts Arising from the Reinterpretation of the Bevill Exclusion for Mineral Processing Wastes". August 18, 1989.

2. Waste Characterization

The next step was to identify, quantify, and characterize the specific waste streams generated by the 43 identified processing sectors in order to ascertain the extent to which these facilities might be brought into the subtitle C hazardous waste management system. For a few of these sectors, the Agency had past field surveys or sampling data to draw upon, supplemented to some degree by data submitted by commenters in response to previous NPRM's. For the majority of commodity sectors, however, we relied upon technical expertise provided by process engineers experienced in designing and constructing mineral processing facilities and associated waste management systems.

TABLE 3.—MINERAL PROCESSING SECTORS NOT GENERATING POTENTIALLY HAZARDOUS MINERAL PROCESSING WASTES

Antimony [1]
Barite
Bauxite
Beryllium
Boron
Cadmium
Cerium
Cesium/Rubidium
Chromium
Coal Gas
Gemstones
Gold/Silver
Hydrofluoric Acid
Iron
Lightweight Aggregate
Lithium (from ore)
Magnesium (from ore)
Manganese, Ferromanganese
Phosphoric Acid (wet process)
Silicon, Ferrosilicon
Steel
Strontium
Synthetic Rutile
Titanium Dioxide
Zirconium/Hafnium

[1] From pyrometallurgical operations.

For each sector, a brief but systematic review was conducted for the principal or typical processing operation(s), including, for each waste, a waste description, waste generation-to-product ratio estimates, and an assessment of the likelihood of the particular waste exhibiting one or more hazardous waste characteristics. Based upon available information and best professional judgment, 25 of the 43 mineral processing commodity sectors evaluated were found not to generate any solid wastes that are likely to fail characteristic tests for hazard. Because these sectors, which are listed in Table 3, will not suffer economic impacts because of today's final rule, they were not considered further. A total of 18

commodity sectors with 118 facilities were determined likely to generate wastes that may fail hazardous waste characteristic tests. EPA has made every attempt to develop analytical elements (e.g., number of facilities in a given sector) that are directly comparable. Nonetheless, because production data (processes employed, product types, shipment volumes) for some commodities are not available on a plant-specific basis, the number of facilities identified as generating potentially hazardous wastes does not in all cases correspond to the number of facilities producing a given commodity, because very different production processes may be employed within the same commodity sector. Therefore, the number of facilities contributing to a sector's aggregate value of shipments and other sector-wide data may differ from the number of facilities predicted to experience compliance costs. In these cases, EPA may have understated the magnitude of economic impacts. Potentially affected sectors, together with the types and quantities of wastes that might be regulated under subtitle C, are presented in table 4.

TABLE 4.—HAZARDOUS WASTE GENERATION BY MINERAL PROCESSING SECTORS

Mineral sector	Process	Hazardous waste type	Facilities generating hazardous waste	Total hazardous waste (MT/year)
Aluminum	Reduction	Casthouse dust	16	13,301
	Reduction	Sludge	13	66,945
	Reduction	Cryolite recovery residue	1	30,000
Antimony	Electrolytic Refining	Stripped anolyte solution solids	1	180
Arsenic	Residuals	Lead dust leachate residue	1	339
Bismuth	Lead dross refining	Metal chloride residues	1	2,937
Calcium Metal	Retorting	Quicklime	1	43
Copper (Non-Electrowinning)	Smelting	Acid plant blowdown	8	4,399,710
	Smelting/Refining	Sodium hydroxide wastewater treatment plant sludge.	1	5,616
	Refining	Bleed electrolyte	8	444,600
	Smelting/Refining	Process wastewater	11	530,500
Copper (Electrowinning)	Electrowinning slime reduction	Residuals	10	5,400
Elemental Phosphorus	Electric furnace	Furnace scrubber blowdown	5	153,000
	Separation	Dust	5	6,446
Ferrochromium	Smelting	Slags and residues	8	181,400
Germanium	Separation	Leachate residue	3	8
Lead	Smelting	Acid plant blowdown	3	350,000
	Smelting	Spent furnace brick	4	530
	Smelting	Slag fines	1	10,400
Magnesium	Electrolytic Refining	Smut	2	21,708
Mercury	McDermitt facility	Furnace calcines	1	11
		Particulate control effluent	1	1,699
		SO_2 scrubber effluent	1	2,792
Mercury	Byproduct of gold	Dust	9	9
		Furnace residue	9	79
Molybdic Oxide/Rhenium	Roasting	Gas cleaning effluent solids	2	64
	Roating	Refining wastes	2	2,335
	Ion Exchange	Rhenium raffinate	2	88,440
Phosphoric Acid	Furnace	Dust slurry	17	7,394
	Furnace	Phosphate contaminted wastewater	17	6,470
Tantalum/Columbium	Digestion	Digestor sludge	8	3,707
	Digestion	Raffinate solids	8	7,413
Tin	Smelting	APC scrubber blowdown	1	68,000
Titanium Metal	Sponge	Waste chloride	3	36,484
Zinc	Smelting/Refining	Process wastewater	2	1,451,000
	Smelting/Refining	Acid plant blowdown	3	305,800
	Smelting	Synthetic gypsum	1	16,600
	Smelting/Refining	Wastewater treatment plant sludge	5	45,230
	Electrowinning	Non-saleable residues	2	13,600
Total				8,280,200

3. Compliance Cost Estimation Methods

For this analysis, EPA developed likely waste management scenarios for typical facilities in each sector, addressing both current (baseline) processing waste management practices and waste management options under current subtitle C requirements. Typical practices (at appropriate scales of application) for both baseline and subtitle C compliance scenarios include techniques such as wastewater treatment in tanks, management/disposal in waste piles or landfills, and shipment for disposal at commercial off-site landfills or treatment facilities. These management scenarios were then implemented through the use of cost engineering functions to compute the incremental compliance costs of today's rule.

The baseline management scenario was developed using knowledge of current practices. The subtitle C compliance scenario was developed based upon existing statutory and regulatory requirements, and assumptions regarding the types of engineering practices that would be employed to manage individual, newly hazardous wastes under subtitle C. Rather than applying uniform subtitle C assumptions relating to on-site or off-site disposal or assuming that one particular waste disposal practice would be adopted exclusively for all sectors, the Agency designed a tailor-made subtitle C compliance scenario for each waste stream and sector. That is, each waste in each sector was assigned to a sequence of individual waste management techniques appropriate to the physical and chemical characteristics of the material in

question, in such a way as to simulate a minimum cost management practice sequence for that waste type and quantity. In cases where two or more technical options existed for managing a particular waste type, EPA selected the least-cost option for managing a given waste quantity.

For each newly hazardous waste stream, an affected facility would be faced with the choice of constructing subtitle C management units or sending the material off-site for disposal. This decision is influenced by economies of scale; for most types of waste management practices, EPA determined that generators of small quantities would pay for off-site disposal, but generators of larger quantities would construct on-site management units. The waste quantity break points and the data that underlie them are presented in the technical background document for this analysis.

For all potentially hazardous mineral processing wastes in a given sector, EPA calculated baseline and projected subtitle C management costs, at the plant or facility level, for a "model plant" of average commodity processing and waste generating capacity. Results were then extrapolated to develop commodity sector totals, and then further aggregated to 4-digit Standard Industrial Classification (SIC) industry-wide totals and U.S. nationwide totals. Annual compliance costs represent the sum of annualized charges for capital investments, operating and maintenance expenses, and costs for on-site closure and postclosure responsibilities, where appropriate.

Because this is a screening-level analysis of a very large number of industrial sectors that was conducted during a short period of time, the results of the analysis must be considered somewhat uncertain. While EPA has attempted to obtain complete coverage of all domestic mineral processing activity, the depth of information that the Agency has been able to develop is variable. EPA is confident that it has identified the major processing operations and the major solid wastes associated with them for each commodity sector. The possibility exists, however, that additional waste streams generated by these processing operations may exist and may require management under subtitle C of RCRA. To the extent that this is true, EPA has underestimated the compliance costs of today's rule.

It is important to note, however, that in many respects, EPA used conservative assumptions in conducting this analysis. For example, for many sectors, the Agency used general engineering or geologic information about the nature and composition of various waste streams to infer whether they would be hazardous, and, if in doubt, adopted the conservative assumption that they would be hazardous. Furthermore, wastes assumed to be or that tested hazardous at one facility were assumed to be hazardous at every facility in that sector using the same or similar processes. EPA also assumed that all affected facilities would be encountering subtitle C requirements for the first time and would therefore not be able to take advantage of scale economies through comanagement of hazardous wastes from other operations (e.g., in addition to mineral processing they may conduct regulated activities that are not covered by Bevill, such as chemical manufacturing).

B. Aggregate and Sector Compliance Costs

EPA's estimate of the total annual cost impact of today's rule is $52.8 million annually. Predicted sector-wide costs span three orders of magnitude across the various affected commodity sectors. Aggregate and sector-specific cost estimates are presented in table 5.

TABLE 5. SUMMARY OF COSTS IN AFFECTED SECTORS WITH HAZARDOUS PROCESSING WASTES

SIC and sector	Aggregate sector costs ($)	Number of affected facilities	Cost per affected facility ($)	Cost/metric ton of mineral ($/mt) (sector-wide)	Costs/value of shipments (%) (sector-wide)
Minerals:					
2819—Phosphorus, elemental	3,111,000	5	622,200	9.65	0.57
2874—Phosphoric acid (furnace grade)	997,000	17	58,647	1.08	0.17
3313—Ferrochromium	4,711,000	8	588,875	44.02	4.67
3331—Copper—excluding Electrowinning	26,170,000	11	2,379,091	27.04	1.32
3331—Copper—Electrowinning	308,000	10	30,800	2.47	0.12
3332—Lead, including bismuth	2,943,000	4	735,750	7.86	1.09
3333—Zinc	7,620,000	5	1,524,000	28.83	2.70
3334—Aluminum	3,107,000	16	194,188	0.91	0.05
3339—Antimony	11,000	1	11,000	0.61	0.02
3339—Calcium metal	2,000	1	2,000	3.24	0.04
3339—Magnesium	233,000	2	116,500	2.15	0.06
3339—Mercury (excluding gold by-production)	159,000	1	159,000	230.65	2.61
3339—Mercury (by-product of gold)	1,000	9	111	1.14	0.01
3339—Molybdic oxide and rhenium	1,487,000	2	743,500	70.04	0.88
3339—Tantalum/columbium	513,000	8	64,125	484.21	0.29
3339—Tin	725,000	1	725,000	204.42	2.45
3339—Titanium sponge metal	728,000	3	242,667	39.91	0.42
3339—Arsenic acid	19,000	1	19,000	56.06	7.05
3339—Germanium	0	3	0	0.00	0.00
Total—All affected mineral sectors	52,845,000	[1] 103	513,058	7.91	0.46
Distribution by four-digit SICs:					
2819—Industrial inorganic chemicals, NEC	3,111,000	5	622,200	9.65	0.57
2874—Phosphatic fertilizers	997,000	17	58,647	1.08	0.17
3313—Electro-metallurgical products	4,711,000	8	588,875	44.02	4.67
3331—Primary copper	26,478,000	[1] 16	1,654,875	27.04	1.32
3332—Primary lead	2,943,000	4	735,750	7.86	1.09
3333—Primary zinc	7,620,000	5	1,524,000	28.83	2.70
3334—Primary aluminum	3,107,000	16	194,188	0.91	0.05
3339—Primary nonferrous metals, NEC	3,878,000	32	121,188	22.39	0.38

[1] Five electrowinning facilities engage also in non-electrowinning refining processes.

Note: All averages are weighted averages.

These data indicate that nearly half of the total compliance costs will be borne by the primary copper sector, and that affected facilities (16 in total) in the copper and zinc sectors will experience annual compliance costs in excess of $1 million per facility. In total, 36 of the 103 potentially affected facilities (35 percent) are predicted to experience annual compliance costs of more than $500,000 per facility.

On the other hand, six commodity sectors will face compliance costs of less than $50,000 per affected facility, and almost one-half (50 of 103) of the facilities generating potentially hazardous wastes removed from the Bevill exclusion by today's rule will experience, on average, incremental subtitle C costs of less than $100,000.

C. Economic Impacts

EPA's screening-level analysis of economic impact compares the magnitude of average compliance costs for each sector to the estimated value of shipments in those sectors. This ratio provides a first approximation of the extent to which the profitability of firms, or, alternatively, commodity prices, may be adversely affected by the imposition of regulatory compliance costs. In this screening analysis, the Agency grouped commodity sectors into three groups according to the value of compliance costs to value of shipments: Those with ratios below one percent, those between one and five percent, and those with ratios greater than five percent. Results are displayed in Table 6.

TABLE 6. CATEGORIZATION OF MINERAL SECTORS, BY LEVEL OF COMPLIANCE COSTS

Cost category mineral	SIC	Costs/value of shipments (%) (sector-wide)	Number of affected facilities
I. Below 1.0 percent:			
Germanium	3339	0.00	3
Mercury (by-product of gold)	3339	0.01	9
Antimony	3339	0.02	1
Calcium metal	3339	0.04	1
Aluminum	3334	0.05	16
Magnesium	3339	0.06	2
Copper—electrowinning	3331	0.12	10
Phosphoric acid (furnace grade)	2874	0.17	17
Tantalum/Columbium	3339	0.29	8
Titanium sponge metal	3339	0.42	3
Phosphorus, elemental	2819	0.57	5
Molybdic oxide and rhenium	3339	0.88	2
Total in category			77
II. 1.0–4.9 percent:			
Lead, including bismuth	3332	1.09	4
Copper—excluding electrowinning	3331	1.32	11
Tin	3339	2.45	1
Mercury (excluding gold by-production)	3339	2.61	1
Zinc	3333	2.70	5
Ferrochromium	3313	4.67	8
Total in category			30
III. 5.0 percent or above:			
Arsenic acid	3339	7.05	1
Total in category			1

NOTE: 5 copper electrowinning facilities also engage in non-electrowinning processes.

1. Impacts on Commodity Sectors

Twelve mineral sectors comprising 76 percent of the potentially affected facilities will incur compliance costs of less than one percent of their annual value of shipments. These are the germanium, by-product mercury, antimony, calcium metal, aluminum, magnesium, copper from electrowinning, tantalum/columbium, furnace process phosphoric acid, titanium sponge, elemental phosphorus, and molybdic oxide/rhenium sectors. Of these, only the molybdic oxide/rhenium commodity sector, with two potentially affected facilities, approaches EPA's one percent cut-off value for identifying moderate economic impacts.

Seven mineral commodity sectors, with a combined total of 31 facilities, will have compliance costs between one and seven percent of their value of shipments. These include lead/bismuth, copper from processes other than electrowinning, tin, primary mercury, zinc, ferrochromium, and arsenic acid. Only the ferrochromium sector, with eight facilities, and the arsenic acid sector, with one facility, have predicted impacts in excess of three percent of their respective value of shipments.

Sectors with ratios above one percent were considered vulnerable to moderate to significant financial impacts and were evaluated in more detail in terms of market and industry factors that might affect the ultimate incidence and impact of the costs.

To place the results into perspective, EPA examined a number of factors such as absolute price levels, major end users of the mineral commodity, competition from imports and substitutes, secondary production, and flexibility in other production cost factors.

- *Lead/Bismuth.* (Average cost/sales of 1.1 percent.) Major uses of lead are in

automotive batteries, construction materials, and a wide range of other products. Secondary recovery of lead from used automotive batteries provides a substantial portion of supplies. While marginal substitution is possible in each of the markets, a price increase of 1.4 percent would not substantially alter the basic use patterns of lead. Bismuth is used in a range of pharmaceuticals and chemicals, as well as in manufacturing machine parts. These applications offer a somewhat stable market for bismuth. However, most domestic consumption comes from imports, limiting the potential for domestic suppliers to raise prices.

• *Copper.* (Average cost/sales of 1.3 percent.) Copper is widely used in building construction, electrical and electronic products, industrial machinery and equipment, transportation, and consumer products. The ability of affected firms to raise prices is limited by significant competition from foreign suppliers (some of which are government-supported) and by the wide variety of product substitutes that are available for many copper end uses (e.g., optical fiber in telecommunications cable, plastics in water pipe and plumbing fixtures).

• *Tin.* (Cost/sales of 2.4 percent.) This metal is widely used in coatings, particularly for cans, and alloys in electrical and construction applications. In the coatings business, aluminum, glass, paper, and plastic provide strong competition. Other metals compete in alloy applications. Secondary recovery of tin from scrap is another factor adding to competition. A price increase of 2.4 percent could have a marginal impact on domestic primary tin sales, but may have a significant impact on the one remaining domestic primary tin producer.

• *Mercury.* (Cost/sales of 2.6 percent.) Mercury is used in a number of electrical and chemical applications. Competition is found in the form of different technologies for batteries, process alternatives for electrolytic production of chlorine and caustic soda, substantial supplies of imported mercury, and competition from domestic producers extracting mercury from precious metals side-streams (electrowinning slimes). It is unclear that this facility, which accounts for about 14 percent of domestic production, could recover its compliance costs by increasing prices by 2.6 percent.

• *Zinc.* (Average cost/sales of 2.7 percent.) Zinc is used in die castings and anti-corrosive coatings. In castings, zinc competes with aluminum, plastic, and magnesium. In coatings, plastics, paints, and other alloys offer substitutes. A major competitive factor is the large share of supply (greater than half) coming from imported slab zinc. These factors would limit the ability of domestic sources of zinc to raise prices.

• *Ferrochromium.* (Average cost/sales of 4.7 percent.) Ferrochromium is used in specialty and high-performance alloys and steels. Its performance characteristics render it valuable to existing users and would mitigate the effects of a price increase of 4.7 percent. Nonetheless, imported supplies of ferrochromium may limit the ability of domestic sources to raise prices.

• *Arsenic Acid.* (Cost/sales of 7.0 percent.) The plant producing arsenic acid from residual lead dust is unlikely to be able to recover compliance costs by raising prices. Arsenic-based wood preservatives and pesticides are valuable to end-users. However, arsenic acid produced from imported arsenious trioxide and imported arsenic acid account for 99 percent of domestic demand. Therefore, the market price for this product are unlikely to change as a result of production cost increases at this single, small facility.

2. Effects on Consumer Prices

Because most, if not all, of the immediate markets for the affected mineral commodities are as inputs to other manufacturing or industrial activities, and because, as discussed in the previous section, the ability of firms in most affected sectors to pass through compliance costs appears to be limited, EPA believes that, in general, this rule will not create any appreciable changes in consumer prices.

3. Foreign Trade Impacts

Trade is substantial in many of the mineral commodities addressed in this study. Basic import and export data for the sectors that generate potentially hazardous wastes are presented in Tables 7 and 8, respectively. Export markets are generally small for the commodities that EPA has identified as having moderate to significant compliance cost impacts (i.e., cost/value of shipments of one percent or more), and these markets may be adversely affected by the predicted economic impacts of compliance.

TABLE 7. IMPORTS OF MINERALS PRODUCED IN SECTORS GENERATING HAZARDOUS WASTES, 1987

Mineral and categories [1]	Quantity (MT)	Value ($000)
Aluminum—metal	1,245,510	1,852,152
Antimony—metal	9,701	18,171
Arsenic—compounds	1,540	NA
Bismuth—metals and alloys (gross weight)	1,580	8,769
Calcium	352	1,918
Columbium—ore	2,078	6,612
Copper—refined in ingots, etc	469,181	734,725
Ferrochromium—Ferrochromium and ferrochromium-silicon	302,948	155,189
Germanium—unwrought waste and scrap (gross weight)	15	7,987
Lead—base bullion (lead content)	10,827	7,239
Magnesium—metal	10,884	NA
Mercury—metal	636	3,860
Molybdenum—compounds (gross weight)	3,044	13,407
Rhenium—metal, including scrap	3	2,072
Phosphoric acid	NA	NA
Phosphorus, elemental	4,000	6,609
Tantalum—ore	316	5,186
Tin—metal—bars, blocks, pigs, or granulated	41,150	259,699
Titanium—unwrought sponge metal	923	6,321
Zinc—blocks, pigs, and slabs	705,985	581,221

[1] Categories for data on trade do not necessarily correspond to the mineral sectors that involve processing.

Sources: U.S. Bureau of Mines. Minerals Yearbook 1987 and Mineral Commodities Survey 1989.

TABLE 8.—EXPORTS OF MINERALS PRODUCED IN SECTORS GENERATING HAZARDOUS WASTES, 1987

Mineral and categories [1]	Quantity (MT)	Value ($000)
Aluminum—ingots, slabs, crude	281,163	415,003
Antimony—metals and alloys, crude	795	2,817
Arsenic—compounds	167	NA
Bismuth—metals and alloys	38	641
Calcium—metal	NA	NA
Columbium	NA	NA
Copper—refined copper and semi-manufactured	114,721	427,843
Ferrochromium	4,535	5,730
Germanium	NA	NA
Lead—pigs, bars, cathodes, sheets, etc	10,116	11,945
Magnesium—metal and alloys, scrap, semi-manufactured	44,151	130,672
Mercury	NA	NA
Molybdenum—compounds (molybdenum content)	1,223	11,146
Rhenium	(2)	(2)
Phosphoric acid—type not specified	500,000	85,912
Phosphorus, elemental	20,302	30,796
Tantalum—ore, metal, other forms; powder	276	34,794
Tin—ingots, pigs, bars, etc	1,318	9,456
Titanium—unwrought sponge metal	85	746
Zinc—slabs, pigs, and blocks	1,082	2,114

[1] Categories for data on trade do not necessarily correspond to the mineral sectors that involve processing.

[2] Negligible.

Sources: U.S. Bureau of Mines. Minerals Yearbook: 1987 and Mineral Commodities Survey 1989.

Because imports of many of the mineral commodities in question are significant, the ability of domestic producers to raise prices to recover compliance costs, is, as discussed above, quite limited. A direct comparison of processed domestic minerals with imports is difficult because of the presence of imports in the form of both base metals and other assorted compounds and manufactured products. Nonetheless, using the import figures in table 8 as one measure of the scale of imports, the international trade situation facing the firms in the commodity sectors that will experience cost impacts above the one percent level can be summarized as follows:

- Imports account for a relatively low percentage of domestic demand for lead and for moderate shares of copper and mercury;
- Imports exceed processed domestic production in the tin, zinc, and ferrochromium sectors; and
- Trade data for arsenic acid are difficult to quantify; imports of arsenious trioxide (an intermediate in the production of arsenic acid) are substantial.

In view of the above, it is unlikely that the overall trade balance in the domestic minerals industry will be significantly affected by today's rule, though in some sectors regulatory cost impacts may increase already positive net imports.

IX. Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA) of 1980 (Pub. L. 96–354), which amends the Administrative Procedures Act, requires Federal regulatory agencies to consider "small entities" throughout the regulatory process. The RFA requires, in section 603, an initial screening analysis to be performed to determine whether a substantial number of small entities will be significantly affected by a regulation. If so, regulatory alternatives that eliminate or mitigate the impacts must be considered.

Section 608 of the Act allows an Agency head to waive or delay completion of the screening analysis in response to an emergency that makes compliance with the requirements of section 603 on a timely basis impracticable. In previous NPRMs to this rule, the Agency indicated that there was insufficient time within the Court-ordered deadline to complete a comprehensive impact screening for small business impacts, but that, based on previous analyses for metallic metals processing and general knowledge of waste characteristics in non-metals processing, it was probable that there would not be significant small business impacts from this rulemaking (54 FR 15347).

The Agency has now completed a comprehensive screening analysis to determine the potential for significant small business impacts, as described below. Based upon this subsequent analysis, the Agency has concluded that today's final rule will not have a significant adverse impact on a substantial number of small mineral processing companies. With very few exceptions, as indicated below, the commodity sectors with moderate to substantial predicted cost/economic impacts contain either few or no small business enterprises.

A. Definition of Affected Small Entities

Today's rule has its primary direct effects on ore and mineral processing facilities that generate wastes that could fail any of the Agency's tests for hazardous waste characteristics. To the best of the Agency's ability within the time constraints of this Court-ordered final rule, the mineral commodity sectors most likely to face subtitle C compliance costs have been identified in section VIII of this preamble, based on EPA's screening study of cost and economic impacts. Eighteen commodity sectors falling within eight 4-digit SIC codes represent the population of affected business firms (see table 6, above).

For purposes of defining "small business" firms, EPA has relied on the standard definitions of the Small Business Administration (SBA) as published at 13 CFR ch. 1, part 121. For the industries in question, SBA employs a basic employment-based definition, with the small business cut-off value for total company employment ranging between 500 and 1,000 employees, depending upon the specific industry in question.

B. Approach and Data Sources

Based upon the results of the economic impact screening analysis described above in section VIII, EPA conducted a comprehensive RFA business ownership screening analysis for those mineral commodity sectors estimated to incur moderate to significant economic impacts associated with today's rule. While it was not possible in the cost analysis to develop compliance cost estimates specific to different sizes of facilities within each affected mineral sector, all potentially affected small businesses were identified individually. Comparative data were then available to evaluate (a) how many small businesses operate in the mineral sectors predicted by the economic impact screening analysis to be significantly affected and (b) what fraction of the overall small business population in the minerals processing-related industry categories (SICs) might be affected by subtitle C requirements pursuant to this rule.

Working largely with U.S. Bureau of Mines mineral commodity specialists and file data, each of the facilities engaged in affected mineral sectors was identified by name and location. If the facility was owned by a separate parent company, that company was identified using either the Directory of Corporate Affiliations [10] or the Trinet Data Base.[11] Thus, for each sector EPA determined the total number of businesses owning facilities. The Agency then determined the number of employees in each business using one of four sources: Standard and Poor's Corporate Records,[12] Ward's Business Directory,[13] the Trinet Data Base, or phone contacts. Employment figures for public companies were determined using Standard and Poor's Corporate Records. Ward's Business Directory provided employee figures for many of the larger private businesses and the Trinet Data Base identified employee numbers for many of the smaller private businesses. For the small number of businesses that did not appear in any of these sources, the Agency contacted the business by phone to obtain employee information. For all but three of the facilities in the 18 affected mineral commodity sectors, the Agency was able to determine the size of the owner company.

EPA obtained the appropriate SIC classification for each affected sector from the Department of Commerce. The Agency then compared the employee estimates to the Small Business Administration's (SBA's) definition of a small business for the sector's SIC code and determined the number of small and large businesses in that sector. SBA defines small businesses as less than 1,000 employees or less than 750

[10] National Register Publishing Company, "Directory of Corporate Affiliations" (Wilmette, IL.: 1988).

[11] Trinet Company Database, Trinet Inc. (Parsippany, NJ.: 1988).

[12] Standard and Poor's Corporation, "Standard and Poor's Corporation Records" (New York, New York: 1988).

[13] Information Access Company, "Ward's Business Directory, Volume 1, US Private Companies, Largest Private Plus Selected Public Companies" (Belmont, CA: 1988).

employees for most of the SIC codes.[14] Results of this analysis are displayed in appendix B to today's preamble.

The Agency also classified the number of affected small businesses by SIC code, then compared this to the total number of small businesses in that SIC code, based on SBA estimates of the total number of small businesses in each SIC code. EPA also computed the percentage of the total number of firms within a given 4-digit SIC code accounted for by affected small businesses and affected small and undefined businesses. Appendix C to today's preamble displays the results of this analysis.

C. Results

From the cost analysis, facilities and companies in 18 mineral commodity sectors within eight 4-digit SIC industries would be subjected to regulatory compliance costs by today's rule. The sectors were previously grouped by level of impact in Table 6. Of the 18 sectors evaluated for economic impact, seven sectors-lead/bismuth, copper from operations other than electrowinning, tin, primary mercury, zinc, ferrochromium, and arsenic acid—have potential average compliance costs greater than one percent of value of shipments (sales) and could therefore be considered to face moderate to substantial impacts for affected firms. Lead/bismuth, tin, mercury (in terms of the one affected facility), and arsenic acid have no small business operations. Only zinc (with one small company), ferrochromium (with three small firms), and possibly copper (with one firm of unknown size), therefore represent affected sectors of concern with respect to small business impacts, with a combined total of four or five small business companies. Supporting data for these findings are presented in appendix C to this preamble.

Taken together, the number of small businesses in these two or three sectors represents a very small fraction of the total number of small businesses in the relevant mineral processing industries.

Based upon this screening analysis, the Agency concludes that there will not be a significant adverse impact on a substantial number of small mineral processing companies as a result of this rulemaking.

List of Subjects in 40 CFR Part 261

Hazardous waste, Waste treatment and disposal, Recycling, Reporting and recordkeeping requirements.

Dated: August 18, 1989.

F. Henry Habicht,

Acting Administrator.

Appendix A—Mineral Commodities Produced by Beneficiation Operations

Commodity sector	Sources
Ammonium paratungstate	(A)
Asbestos	(A)
Asphalt, natural	(A)
Boron (from brines)	(A, B)
Bromine (from brines)	(A)
Clay	(A, B)
Coal	(A)
Diatomite	(A)
Emery	(A)
Feldspar	(A)
Fluorspar	(A)
Garnet	(A, B)
Gilsonite	(A)
Glauconite (greensand)	(A)
Gypsum	(A)
Ilmenite	(A)
Iodine (from brines)	(A)
Kyanite	(A)
Limestone/Lime	(A)
Lithium (from brines)	(A, C)
Magnesia	(A)
Mica	(A)
Mineral waxes	(A)
Olivine	(A)
Peat	(A)
Perlite	(A)
Phosphate	(A)
Platinum group metals	(A)
Potash	(A)
Pumice	(A)
Pyrobitumens	(A)
Pyrophyllite	(A)
Rare Earths	(A, B)
Rutile	(A)
Salt	(A)
Sand and gravel	(A)
Scandium	(A)
Silica sand	(A)
Soda ash	(A)
Sodium sulfate	(A)
Staurolite	(A, B)
Stone, crushed	(A)
Stone, dimension	(A)
Sulfer	(A)
Talc	(A)
Tripoli	(A, B)
Vanadium	(A)
Vermiculite	(A)
Wollastonite	(A, B)
Zeolites	(A, B)
Total beneficiation sectors	50

Sources:
(A)—Bureau of Mines (Commodity Specialists, 1987 Mineral Yearbook, 1985 Mineral Facts and Problems).
(B)—Kaiser Engineers, Inc, 1989, See Technical Background Document for this Rulemaking.
(C)—Charles River Associates, 1989, See Technical Background Document for this Rulemaking.

APPENDIX B—COMPANIES IN MINERAL PROCESSING SECTORS AFFECTED BY TODAY'S RULE BY SBA SIZE CATEGORY

SIC code and mineral commodity	SBA definition of a small business (maximum employment)	Number of large businesses	Number of small businesses	Number of businesses of unknown size	Number of total businesses	Percent small	Percent small or unknown
2819—Phosphorus, elemental	1,000	4	0	0	4	0	0
2874—Phosphoric acid, FG	500	5	1	0	6	17	17
3313—Ferrochromium	750	5	3	0	8	38	38
3331—Copper	1,000	10	0	1	11	0	9
3332—Lead	1,000	2	0	0	2	0	0
3333—Zinc	750	3	1	0	4	25	25
3334—Aluminum	1,000	10	1	0	11	9	9
3339—Arsenic	750	1	0	0	1	0	0
3339—Antimony	750	5	4	0	9	44	44
3339—Bismuth	750	1	0	0	1	0	0
3339—Calcium	750	1	0	0	1	0	0
3339—Germanium	750	2	0	1	3	0	33
3339—Magnesium	750	2	0	0	2	0	0
3339—Mercury/gold	750	6	3	1	10	30	40
3339—Rhenium/molybdic oxide	750	2	0	0	2	0	0
3339—Tantalum/columbium	750	6	2	0	8	25	25

[14] SBA does not distinguish between businesses that employ more than 500 and less than 1,000 persons, i.e., it is not possible to determine how many businesses employ less than 750 people using SBA data. In the case of SIC categories in which 750 employees is the small business cut-off value, EPA used the SBA figures for businesses with less than 1,000 employees. The actual number of small businesses for those SIC categories may therefore be less.

APPENDIX B—COMPANIES IN MINERAL PROCESSING SECTORS AFFECTED BY TODAY'S RULE BY SBA SIZE CATEGORY—Continued

SIC code and mineral commodity	SBA definition of a small business (maximum employment)	Number of large businesses	Number of small businesses	Number of businesses of unknown size	Number of total businesses	Percent small	Percent small or unknown
3339—Tin	750	1	0	0	1	0	0
3339—Titanium sponge	750	2	1	0	3	33	33
Subtotal for SIC		29	10	2	41	24	29
Total—above minerals		68	16	3	87	18	22

APPENDIX C—AFFECTED SMALL BUSINESS MINERAL PROCESSORS AS A PERCENT OF SMALL BUSINESSES IN EACH INDUSTRY CATEGORY

SIC code and industry category description	SBA definition of a small business (maximum employment)	Total small businesses in SIC category [1]	Affected mineral processing businesses—			
			Affected small businesses	Affected businesses—unknown size	Affected small businesses/total small businesses (percent)	Affected small and unknown businesses/total small businesses (percent)
2819—Industrial inorganic chemicals, N.E.C.	1,000	885	0	0	0.0	0.0
2874—Phosphatic fertilizers	500	91	1	0	1.1	1.1
3313—Electro-metallurgical products	750	34	3	0	8.8	8.8
3331—Primary copper	1,000	2	0	1	0.0	50.0
3332—Primary lead	1,000	17	0	0	0.0	0.0
3333—Primary zinc	750	13	1	0	7.7	7.7
3334—Primary aluminum	1,000	43	1	0	2.3	2.3
3339—Primary nonferrous metals, NEC	750	184	10	2	5.4	6.5
Total—Above SIC categories		1,269	16	3	1.3	1.5

[1] The Small Business Administration (SBA) provided the estimates of the total number of small businesses within each SIC category. SBA does not distinguish between businesses that employ more than 500 and less than 1,000 persons, i.e., it is not possible to determine how many businesses employ less than 750 people using SBA data. In the case of SIC categories in which 750 employees is the small business cut-off value, EPA used the SBA figures for businesses with less than 1,000 employees. The actual number of small businesses for those SIC categories may therefore be less.

For the reasons set out in the preamble, part 261 of title 40 of the Code of Federal Regulations is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTES

1. The authority citation for part 261 continues to read as follows:

Authority: (42 U.S.C. 6905, 6912(a), 6921, and 6922).

2. Section 261.3 is amended by revising paragraphs (a)(2) (i) and (iii) to read as follows:

§ 261.3 Definition of hazardous waste.

(a) * * *

(2) * * *

(i) It exhibits any of the characteristics of hazardous waste identified in subpart C except that any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under § 261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C of this part only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Extraction Procedure Toxicity characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table I to § 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

* * * * *

(iii) It is a mixture of a solid waste and a hazardous waste that is listed in subpart D of this part solely because it exhibits one or more of the characteristics of hazardous waste identified in subpart C, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part or unless the solid waste is excluded from regulation under § 261.4(b)(7) and the resultant mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed.

* * * * *

2. Section 261.4 is amended by revising paragraph (b)(7) to read as follows:

261.4 Exclusions.

* * * * *

(b) * * *

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore. For purposes of this paragraph, beneficiation of ores and minerals is restricted to the following activities: crushing, grinding, washing, dissolution, crystallization, filtration, sorting, sizing, drying, sintering, pelletizing, briquetting, calcining to remove water and/or carbon dioxide, roasting in preparation for leaching (except where the roasting/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing), gravity concentration, magnetic separation, electrostatic separation, floatation, ion exchange, solvent extraction, electrowinning,

precipitation, amalgamation, and heap, dump, vat, tank, and *in situ* leaching. For the purposes of this paragraph, solid waste from the processing of ores and minerals includes only:

(i) The following solid wastes from the processing of ores and minerals that are retained within this exclusion:

(A) Slag from primary copper smelting;

(B) Slag from primary lead smelting;

(C) Red and brown muds from bauxite refining;

(D) Phosphogypsum from phosphoric acid production;

(E) Slag from elemental phosphorus production; and

(ii) The following solid wastes from the processing of ores and minerals that are conditionally retained within this exclusion, pending collection and evaluation of additional data:

(A) Roast/leach ore residue from primary chromite production;

(B) Gasifier ash from coal gasification;

(C) Process wastewater from coal gasification;

(D) Slag tailings from primary copper smelting;

(E) Calcium sulfate wastewater treatment plant sludge from primary copper smelting/refining;

(F) Furnace off-gas solids from elemental phosphorus production;

(G)Fluorogypsum from hydrofluoric acid production;

(H) Process wastewater from hydrofluoric acid production;

(I) Air pollution control dust/sludge from iron blast furnaces;

(J) Iron blast furnace slag;

(K) Process wastewater from primary lead production;

(L) Air pollution control dust/sludge from lightweight aggregate production;

(M) Process wastewater from primary magnesium processing by the anhydrous process;

(N) Process wastewater from phosphoric acid production;

(O) Basic oxygen furnace and open hearth furnace slag from carbon steel production;

(P) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;

(Q) Sulfate processing waste acids from titanium dioxide production;

(R) Sulfate processing waste solids from titanium dioxide production;

(S) Chloride processing waste solids from titanium tetrachloride production; and

(T) Slag from primary zinc smelting.

* * * * *

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Friday
September 1, 1989

Part IV

Department of Labor

Occupational Safety and Health Administration

29 CFR Part 1910

Control of Hazardous Energy Source (Lockout/Tagout); Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. S-012A]

RIN 1218-AA53

Control of Hazardous Energy Sources (Lockout/Tagout)

AGENCY: Occupational Safety and Health Administration, (OSHA).

ACTION: Final rule.

SUMMARY: The Occupational Safety and Health Administration (OSHA) is issuing a standard detailing safety requirement for the control of hazardous energy as a new § 1910.147. This standard addresses practices and procedures that are necessary to disable machinery or equipment and to prevent the release of potentially hazardous energy while maintenance and servicing activities are being performed. The standard requires that lockout be utilized for equipment which is designed with a lockout capability except when the employer can demonstrate that utilization of tagout provides full employee protection. For equipment which was not designed to be locked out the employer may use tagout. In addition, the standard also supplements and supports the existing lockout related provisions contained elsewhere in the general industry standards by providing that comprehensive and uniform procedures be used for complying with those provisions. This standard applies to general industry employment under 29 CFR part 1910, but does not cover maritime, agriculture, or construction employment. The standard also does not cover oil and gas well drilling; the generation, transmission and distribution of electric power by utilities; and electrical work on electric conductors and equipment. These will be the subjects of separate rulemaking efforts.

The standard contains definitive criteria for establishing an effective program for locking out or tagging out energy isolating devices and requires training for authorized and affected employees. The standard requires the employer to implement the specified procedures, and to utilize effective control measures based on the workplace hazards that are encountered. OSHA expects that this standard will prevent approximately 122 fatalities, 28,400 lost workday injuries and 31,900 non-lost workday injuries a year.

This rule, § 1910.147, is being placed in Subpart J of part 1910. The present § 1910.147 is redesignated as § 1910.150 to allow for the new section.

DATES: This final standard shall become effective October 31, 1989, except for paragraphs (c)(4), (c)(7), and (f)(2), of § 1910.147 which contain information requirements currently under review at OMB. A document announcing the effective date of the recordkeeping portions will be published at a later date in the **Federal Register.**

ADDRESS: In accordance with 28 U.S.C. 2112(a), the Agency designates for receipt of petitions for review of the standard, the Associate Solicitor for Occupational Safety and Health, Office of the Solicitor, Room S-4004, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, Occupational Safety and Health Administration, Room N3649, U.S. Department of Labor, Washington, DC 20210, (202) 523-8148.

SUPPLEMENTARY INFORMATION: For additional copies of this standard contact U.S. Department of Labor, Occupational Safety and Health Administration, Office of Publications, Room N3101, Washington, DC 20210, (202) 523-9667.

I. Background

OSHA's General Industry standards, 29 CFR part 1910, were originally published in the **Federal Register** (36 FR 10466, May 29, 1971) pursuant to Section 6(a) of the Occupational Safety and Health Act of 1970 (the OSH Act) and became effective on August 27, 1971. Before their adoption as OSHA standards, these occupational safety and health standards were either national consensus standards or established Federal standards. Virtually all of the current lockout provisions in part 1910 which are affected by this standard were adopted under the section 6(a) procedure.

At the time of adoption of the original OSHA standards, there was no general, all-encompassing consensus standard or Federal standard for locking out, tagging out, or disabling of machines or equipment to protect employees when maintenance or servicing activities were being performed—a gap that this rulemaking addresses. However, OSHA did adopt various lockout-related provisions of consensus standards which had been developed for specific types of equipment. These provisions are not deleted by this rulemaking. Current lockout-related provisions in the General Industry Standards (29 CFR part 1910) are found in the following sections:

1910.178	Powered Industrial Trucks
1910.179	Overhead and Gantry Cranes
1910.181	Derricks
1910.213	Woodworking Machinery
1910.217	Mechanical Power Presses
1910.218	Forging Machines
1910.522	Welding, Cutting and Brazing
1910.261	Pulp, Paper and Paperboard Mills
1910.262	Textiles
1910.263	Bakery Equipment
1910.265	Sawmills
1910.272	Grain Handling
1910.399	Electrical

Note: See Ex. 13 for a detailed list of lockout provisions in the above standards. For further information involving the use of these provisions, refer to the discussion found in Section VI, Summary and Explanation of the Standard, addressing paragraph (a)(3)(ii).

The present OSHA regulations for locking out or tagging out machines and equipment, where they do exist, are not uniform coverage. Inconsistencies in these regulations exist between different equipment and industries, and between different types of equipment in the same industry. Some provisions in the OSHA standards require equipment to have the capability of being "locked out," without requiring such control to be utilized. OSHA feels that the lack of a general standard, and the incompleteness of the existing provisions, have contributed to the alarming number of injuries and fatalities that have occurred.

Since the inception of its enforcement program, OSHA, for the most part, has had to rely upon the use of the "General Duty Clause" (section 5(a)(1) of the Act) citation to ensure that employers provide safeguarding for their employees from the hazards involving the release of hazardous energy. This approach has met with only limited success, limited primarily upon the need for OSHA to prove, in the event of the contest of a section 5(a)(1) citation, that the hazard was a "recognized" hazard and that the hazard was causing or could cause death or serious physical harm. Because of these difficulties, and because of the need to fill a significant gap in the current coverage of part 1910, OSHA has been working since 1977 to gather sufficient information to enable the Agency to write a comprehensive standard for energy control in general industry.

In 1977, OSHA published a Notice in the **Federal Register** entitled "Machinery and Machine Guarding, Request for Information on Technical Issues and Notice of Public Meetings" (42 FR 1741, January 7, 1977) (Docket S-212). In this Notice, OSHA addressed the issue of lockout or tagout, including the general question of whether lockout should always be required when machinery is not in its normal operating mode, or whether alternative methods for employee protection, such as tagout,

should be permitted (42 FR 1807). The purpose of that Notice was to generate information for use in updating the OSHA machine guarding standards (Subpart O). Respondents to that Notice generally recognized the hazards to employees when maintenance and repair activities are undertaken, and the need to use lockout or tagout to control these hazards. There was, however, a considerable range of opinion regarding the effectiveness of either a lock, a tag, or a combination of these devices when they are used as safeguards.

The United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) petitioned OSHA on May 17, 1979 (Docket S–012, [Ex. 2–3]) to establish an Emergency Temporary Standard (ETS) for locking out machinery and equipment. The petition stated that there existed a need to recognize the complexities of modern industrial equipment which use sources of energy other than electricity. It contained a discussion of the increasing need for locking out equipment to prevent that equipment from cycling without warning while it was being worked on, and related the importance of applying lockout procedures to systems using hydraulic or pneumatic power, to energy stored in springs and electrical capacitors, and to potential energy from suspended parts. Abstracts of case studies for fatalities involving 22 UAW members which were attributed to lockout-related causes since 1974 were submitted with the petition. OSHA also received other petitions and letters in support of the UAW petition from other labor organizations, including the AFL–CIO, Allied Industrial Workers, and the United Steelworkers of America.

OSHA responded to the UAW petition on September 11, 1979 [Ex. 2], declining to issue an ETS, but advising that OSHA was proceeding to draft an Advance Notice of Proposed Rulemaking (ANPR) addressing the subject, in which the public would be invited to comment on the major issues involved in the development of a standard.

OSHA published the ANPR for a standard on lockout/tagout in the **Federal Register** on June 17, 1980 (45 FR 41012) (Docket S–012). In that Notice, OSHA raised issues about whether or not a generic standard should be proposed; if so, what should be the scope and application of this lockout/tagout standard; what constituted the necessary and sufficient energy isolation methods and means; and whether there was a need for written procedures and documented employee training. There was not overwhelming support in the comments submitted to OSHA for a generic standard to cover all facets of the lockout/tagout problem. The comments did indicate, however, that a performance-oriented standard, offering enough flexibility to take current work practices into consideration, was desirable, and that requirements for documented procedures and employee training would have many advantages. The comments pertaining to securing energy isolating devices (the use of locks or tags) did not generate an overwhelming response strongly favoring either method. The comments received in response to that Notice were utilized in the development of the proposed standard published in the **Federal Register** on April 29, 1988 (53 FR 15496).

There were several other inputs into the development of the Proposed Rule: First, the National Institute for Occupational Safety and Health (NIOSH) provided considerable data to OSHA on this subject. NIOSH published a notice in the **Federal Register** entitled "Lockout and Interlock Systems and Devices: Request for Information" (45 FR 7006, January 31, 1980) (Docket S–012, [Ex. 2–1]) and provided OSHA with the responses to that Notice. As part of that project, NIOSH also published its "Guidelines for Controlling Hazardous Energy During Maintenance and Servicing" [Ex. 3–4]. Other important sources of information were a Bureau of Labor Statistics (BLS) Work Injury Report (WIR) survey entitled, "Injuries Related to Servicing Equipment" [Ex. 3–3] and two OSHA-directed studies—"Selected Occupational Fatalities Related to Lockout/Tagout Problems as Found in Reports of OSHA Fatality/Catastrophe Investigations" [Ex. 3–5], and "Occupational Fatalities Related to Fixed Machinery as Found in Reports of OSHA Fatality/Catastrophe Investigations" [Ex. 3–6]. Two further studies conducted by OSHA involved the compilation and analysis of OSHA Form 36 Preliminary Fatality/Catastrophe Event Reports [Ex. 3–7] and a compilation of OSHA section (5)(a)(1) citations [Ex. 3–8].

Of great assistance to OSHA in this undertaking was the publication on March 8, 1982, of the American National Standards Institute (ANSI) national consensus standard for lockout/tagout, ANSI Z244.1–1982, "American National Standard for Personnel Protection—Lockout/Tagout of Energy Sources—Minimum Safety Requirements" [Ex. 3–9]. This standard lists the uniform performance requirements for developing and utilizing a lockout or tagout procedure for the protection of employees from the unexpected energization, start-up of machines or equipment or release of stored energy during repair, maintenance, and associated activities. The consensus standard was utilized by OSHA as the primary basis for development of its proposed standard.

In July 1983, OSHA developed a preproposal draft of a standard for lockout/tagout [Ex. 3–10]. This draft was developed by utilizing all relevant materials available to OSHA at that time. This draft was distributed to associations, companies, unions and individuals which OSHA was able to identify as having an interest in the regulation. There were about 80 comments received in response to this preproposal draft. The commenters were generally in support of the effort to develop a safety standard for lockout or tagout; however, some commenters objected to the inclusion of a requirement for locking out during activities classified as "normal production operations." Comments from some sources favored the use of locks rather than tags to secure energy isolating devices, while others welcomed the more flexible approach of permitting the use of locks or tags. There was also considerable comment regarding the use of an Appendix. Many commenters wanted the information supplied in the Appendix moved into the body of the standard for enforceability. Others, however, wanted the Appendix material completely removed on the grounds that reference to it by the courts in contested cases would essentially make it mandatory.

The proposed standard was published in the **Federal Register** on April 29, 1988 (53 FR 15495). Interested persons were afforded 60 days to submit comments and/or request a hearing.

On August 9, 1988, OSHA published a Notice in the **Federal Register** (53 FR 29920) announcing the scheduling of a public hearing and an extension of the period for the submission of comments. The hearing was scheduled for September 22 and 23 in Washington, DC, and September 27 and 28 in Houston, Texas. The comment period was extended until September 22. On August 30, 1988, OSHA published another Notice in the **Federal Register** (53 FR 33149) changing the dates for the Houston, Texas segment of the hearing from September 27 and 28 to October 12 and 13.

There were 16 parties who participated in the public hearing which was presided over by Administrative Law Judge Jeffrey Tureck. During the later stages of the hearing, at the suggestion of several of the hearing

participants Judge Tureck established a post hearing comment period, allowing the submission of additional data and evidence through November 28, 1988, and the submission of final arguments and briefs through December 23, 1988. Based upon subsequent request of several of the hearing participants, the Administrative Law Judge extended the comment period until February 6, 1989. Judge Tureck certified the record of the hearing, including materials received in the post-hearing comment period on May 3, 1989.

The comments concerning the preproposal draft (Docket S-012), the special studies and other information used in the development of the proposal for this standard, the comments received in response to the publication of the proposed standard, the evidence adduced at the public hearing and the materials submitted in the post-hearing comment period, were all utilized in the development of this Final Rule.

II. Hazards

Whenever machines or equipment are utilized in industry, there are hazards not only to the employees who work with the machines or equipment but also to other employees who work or otherwise are in the immediate area. Moreover, when it is necessary to perform maintenance or servicing on machines or equipment, such activities generate additional, unique hazards due to the continued presence of the energy used by the machine or equipment to perform its production function. This energy can emanate directly from a power source or can be stored in the equipment itself.

OSHA believes that failure to control energy adequately accounts for nearly 10 percent of the serious accidents in many industries. The following accidents, taken from the NIOSH report entitled "Guidelines for Controlling Hazardous Energy During Maintenance and Servicing" [Ex. 4], are typical of these hazards and demonstrate the applicability of the pertinent provisions in the final standard.

1. An employee was cleaning the unguarded side of an operating granite saw. The employee was caught in the moving parts of the saw and pulled into a nip point between the saw blade and the idler wheel, resulting in fatal injuries. (Failure to shutdown or turn off the equipment to perform maintenance—1910.147(d)(2).)

2. An employee was removing paper from a waste hogger. The hogger had been shut down, but the conveyor feeding the hogger had not been. The employee climbed onto the machine, fell onto the conveyor, was pulled into the hogger opening, and was fatally crushed. There was no energy control procedure at this operation. (Failure to document and implement an effective energy control procedure—1910.147(c)(4).)

3. Two employees were repairing a press brake. The power had been shut off for 10 minutes. They positioned a metal bar in a notch on the outer flywheel casing so that the flywheel could be turned manually. The flywheel had not completely stopped. The men lost control of the bar, which flew across the workplace and struck and killed another employee who was observing the operation from a ladder. (Failure to control stored energy—1910.147(d)(6).)

4. An employee was partially inside an asphalt mixing machine, changing its paddles. Another employee, while dusting in the control room, accidentally hit a toggle switch which caused the door of the mixer to close, striking the first employee on the head and killing him. Electrical switches to activate the machine were not deenergized and air pressure to move the doors was not shut off. (Failure to isolate equipment from energy sources—1910.147(d)(3).)

5. An employee was setting up a vacuum forming machine for a run of violin cases. He leaned over the press and accidentally activated the starting switch. His head was crushed between an air cylinder and the frame hogger opening, and was fatally crushed. There was no energy control procedure at this operation. (Failure to document and implement an effective energy control procedure—1910.147(c)(4).)

6. A trainee employee was cleaning a flour batch mixer. The employee was reaching into the machine when another worker activated the wrong switch, thereby turning the machine on. The employee cleaning the flour batch mixer suffered fatal crushing injuries to his neck. There was an unwritten company procedure for locking out during all maintenance. The procedure was not followed. (Failure to document and implement an effective energy control procedure—1910.147(c)(4); failure to train employees adequately in lockout/tagout procedures—1910.147(c)(7).)

7. An employee was cleaning scrap from beneath a large shear when a fellow employee hit the control button activating the blade. The blade came down and decapitated the employee cleaning scrap. (Failure to isolate, lockout/tagout or otherwise disable all potential hazardous energy sources before attempting any repair, maintenance or servicing—1910.147(c)(2).)

Servicing and maintenance activities are necessary adjuncts to the industrial process. They are needed to maintain the ability of all machines, equipment or processes to perform their intended functions. Additionally, erection, installation, construction, set-up, changeover, and dismantling usually must be performed with the equipment deenergized. These types of operations can present the employee with the same types of hazards of unexpected activation, reenergization, or release of stored energy, therefore, they are addressed by this standard. Similarly, lubricating, cleaning, unjamming, and making minor adjustments and simple tool changes are activities which often take place during normal production operations, but which may expose employees to the unexpected activation of the equipment or to the unexpected release of the energy stored in the equipment. All of the above activities are considered to be "servicing and/or maintenance" for the purposes of this standard.

With regard to servicing and/or maintenance which takes place during "normal production operations," it is important to note that this standard is intended to work together with the existing machine guarding provisions of Subpart O of part 1910, primarily §§ 1910.212 (general machine guarding) and 1910.219 (guarding of power transmission apparatus). When a machine is being used for production, § 1910.212 requires that the point of operation be guarded. For example, when an employee is using a table saw to cut wooden parts, the employee would be protected by guards around the blade of the saw. If the employee needs to reach into the point of operation in order to adjust the work piece as part of the production process, § 1910.212 requires that the guarding protection be maintained. As long as guarding is not removed or bypassed, the lockout/tagout standard is not intended to apply to these types of situations. By contrast, using the same table saw, it may be necessary for the employee to remove a piece of wood which has become jammed against the blade of the saw. In doing so, the employee might need to bypass or remove the guard on the saw and reach into the point of operation. Although this action takes place "during" normal production operations, it is not actually production, but is servicing of the equipment to perform its production function. When such servicing may expose the employee to the unexpected activation of the machinery or equipment, or to the release of stored energy, this Final Rule will apply. If the servicing is performed in a way which

prevents such exposure, such as by the use of special tools and/or alternative procedures which keep the employee's body out of the areas of potential contact with machine components or which otherwise maintain effective guarding, this standard will not apply. Thus, lockout or tagout is not required by this standard if the employer can demonstrate that the alternative means enables the servicing employee to clean or unjam or otherwise service the machine without being exposed to unexpected energization or activation of the equipment or release of stored energy.

The above mentioned servicing and/or maintenance activities are currently being accomplished in general industry with varying degrees of safeguarding or protection for employees. This safeguarding or protection ranges from allowing the employee to conduct the servicing or maintenance activity which the machine or equipment is energized and operating (virtually no protection), to requiring that the machine or equipment simply be turned off or shut down, to providing for deenergization and lockout or tagout of the machine or equipment. OSHA believes that the least desirable situation is to allow employees to perform maintenance, repair, or service activities while the machine or equipment is energized and capable of performing its normal production function. The Agency recognizes that there are certain servicing operations which, by their very nature, must take place without deenergization, such as operational testing of machines or equipment. Locking out or tagging out cannot be performed during these operations, since both lockout and tagout require that equipment to be deenergized. Additionally, this standard does not apply when certain tasks are conducted during normal production operations such as repetitive minor adjustments or simple tool changes when these activities do not increase the risk of injury to employees. Conversely, operations such as cleaning and unjamming machines or equipment are covered by this standard when the employee is exposed to greater or different hazards than those encountered during normal production operations; it should be emphasized that this rule applies to cleaning and unjamming when an unexpected activation or release of energy could occur.

The vast majority of servicing or maintenance activities can safely be done only when the machine or equipment is not operating and is deenergized; therefore, these activities are covered by this standard.

Some servicing operations do not expose employees to hazards which would necessitate that a machine, equipment or process be deenergized and locked out or tagged out. However, practices such as reaching beyond guards during the cleaning of rollers of printing presses or the feed points of screw conveyors which the equipment is operating, violate the safety conditions set forth in § 1910.212 for normal production operations, and therefore such activities would be considered servicing activities under this rule.

Performance of maintenance or servicing activities on a machine or equipment that is in operation has the potential of exposing employees not only to contact with moving machinery components at the point of operation, but also to contact with other moving components, such as power transmission apparatus, and also increases the risk of injury due to the position the employee must assume and the need to remove, bypass or disable guards and other safety devices. In many cases, these activities expose the employee to the hazard of being pulled into the operating equipment when parts of the employee's body, clothing or the material or tools used for cleaning or servicing become entrapped or entangled in the machine or equipment mechanism. The use of extension tools or devices to permit the operator to stay outside these danger areas, while of some benefit in reducing direct employee exposure to the hazards of entanglement or entrapment, can, in itself, result in injuries to employees. This can occur, for example, when an employee is struck by the tools or devices that inadvertently come in contact with moving machine components, and are pulled from the employee's grasp.

However, shutting down a machine or equipment usually is not the total solution to the problem. Once the machine or equipment has been stopped, there remains the potential for employee injury from the unanticipated movement of a component of the machine or equipment, or from movement of the material being handled. This unanticipated movement can be caused either by the release of residual energy within the machine or equipment, or as the result of the conversion of potential energy to kinetic energy (motion). For example, residual energy can be manifested by the presence of springs under tension or compression, or by the presence of pressure (either above or below atmospheric) in systems containing gases or liquids.

Potential energy is considered to be a function of the height of an object above some datum plane. This datum plane is usually considered to be where that object would come to rest if the restraint holding the object were released, such as where the upper die in a punch press is positioned above the lower die. If the restraining device holding the upper die in place was to be removed, the potential energy of the upper die would be converted into kinetic energy (downward motion), resulting in the upper die being propelled downward, coming to rest on the lower die. This motion can cause a crushing, cutting, lacerating, amputating or fracture injury to an employee's arm, hand or some other part of the body which occupies the space between the dies.

OSHA believes that the most effective method to prevent employee injury caused by the unanticipated movement of a component of a machine or equipment, or of the material being handled, is either to dissipate or minimize any residual or potential energy in the system, or to utilize a restraining device to prevent movement. This can be accomplished by moving machine or equipment components to a point at which springs are at or near a neutral state, by moving components so that liquids or gases reach or approximate atmospheric pressure, and by blocking material or components or moving them to a point of minimum potential energy (moving components to a stable, resting position).

Further, even though the machine or equipment has been shut off, and even if residual energy has been dissipated, an accident can still occur if there is an inadvertent activation of that machine or equipment. Inadvertent activation can occur due to an error on the part of the employee who is conducting the maintenance or servicing activity, or by any other person. For example, the servicing employee can unintentionally cause the machine or equipment to start by shorting across electrical switches or by accidentally moving controllers (either electrical controls or valves) into the "on" or "operational" position.

An accident can also occur when another person who is not necessarily involved with the maintenance or servicing operation causes the activation of the machine or equipment being serviced. This can occur when a person uses the wrong controller and starts a machine or equipment that the employee did not intend to start. It can also occur when a person finds a machine or equipment not operating and

starts it, without knowing someone else is performing maintenance or service on it. This latter type of accident is more apt to occur when the machine or equipment is large and/or complex, and the employee who is conducting the servicing activity is at a part of the system which is some distance from or not visible from the controls. The generally accepted best means to minimize the potential for inadvertent activation is to ensure that all power to the machine or equipment is isolated, locked or blocked and dissipated at points of control, using a method that cannot readily be removed, bypassed, overridden or otherwise defeated. In the case of an electrically run machine, piece of equipment or process, this can be done by going back toward the original source of the power and shutting off a main switch or by disconnecting the electrical lines. OSHA believes that this action must be followed by the placement of some safeguard to prevent the reenergization of the circuit during the maintenance or servicing. To ensure that another employee will not attempt to restart the machine or equipment or to reenergize the circuit, there must be some assurance that all other employees know that the circuit is deenergized and must remain so. This can be accomplished by the utilization of a standardized procedure for deenergizing the system; by training employees to familiarize them with the restrictions of the procedure which apply to them; and by enforcing a prohibition on another employee removing or bypassing another's safeguard. Those employees whose job require them to opeate or use a machine or equipment that must have maintenance or servicing performed on it, must be aware that the machine or equipment is going to be stopped or shut down, and locked out or tagged out, and that they should not attempt to restart or reenergize it. Additional training is also needed for those employees who must utilize the procedure.

Even if all other protective measures are taken, accidents can still occur following the completion of the maintenance, repair or servicing activity, if the machine or equipment is reenergized and started before all guards and other safety devices have been replaced or reinstalled. Additionally, all tools and other foreign objects must be removed from the location and a check completed to ensure that no employees are in a place where the re-energization and starting of the machine or equipment will endanger them.

III. Accident Data

The collection of data on accidents resulting from a failure to utilize proper lockout or tagout procedures is hampered because many accidents are not reported; are reported only locally; or are reported and categorized under other causal factor categories (such as "caught-in" or "caught-between"). Incorrect or incomplete categorization is particularly true for lockout related accidents, since many of the injuries are grouped under the more commonly used classifications such as, burns, electrocutions, lack of machine guarding or equipment failure.

OSHA also recognizes that there has been some underreporting of accident data—either inadvertent or intentional. As a result, OSHA believes that the data available represent only a portion of the total injuries and fatalities that have occurred. However, OSHA believes that the accidents which have been recorded or reported and investigated or studied as being "lockout related" provide a graphic illustration of the extent of the problem, the causal factors, the distribution of accidents in industry, and the type and severity of injuries resulting from those accidents.

There have been several studies conducted to determine the magnitude and extent of the problem. These studies were conducted by: (a) The U.S. Department of Labor, Bureau of Labor Statistics; (b) OSHA's Office of Data Analysis (formerly Office of Statistical Studies and Analysis); (c) the National Institute for Occupational Safety and Health (NIOSH); (d) OSHA's Office of Experimental Programs; and (e) OSHA's Office of Mechanical Engineering Safety Standards. During the hearing, the UAW provided detailed data on fatalities and injuries (Tr. p. H216, H253), which they expanded upon in their post-hearing submission (Ex./ 3–49). The studies are discussed in the following paragraphs.

A. *Bureau of Labor Statistics Work Injury Report Study.* The first study examined by OSHA was the Work Injury Report Study entitled "Injuries Related to Servicing Equipment" (Ex. 3–3). This study is a compilation of reports of accidents and follow-up survey questionnaires sent out by the Bureau of Labor Statistics (BLS). The survey, conducted from August to November 1980, covered workers who were injured while cleaning, repairing, unjamming or performing other non-operating tasks on machines, equipment and electrical or piping systems. BLS identified accidents from 25 participating states, and mailed each of the injured employees a follow-up questionnaire containing inquiries about the specific details of his/her accident. There were 1,285 questionnaires sent out and 833 (approximately 65 percent) of the employees responded. Not all questions were responded to by all participants, since many of the questions related to situations which may not have been relevant to the circumstances of each injury. In some instances, many of the respondents also gave multiple responses to a single question.

Tables I through VI present tabulations of the results of the BLS Work Injury Report Study.

TABLE I.—INDUSTRY DISTRIBUTION—BY STANDARD INDUSTRIAL CLASSIFICATION (SIC) MAJOR DIVISION AND COMPANY SIZE

Industry	Workers	Percentages (1)
Total	833	100
Div A—Agriculture, forestry and fishing	12	1
B—Mining	1	
C—Construction	35	4
D—Manufacturing	619	74
E—Transportation and public utilities	19	2
F—Wholesale trades	57	7
G—Retail trades	31	4
H—Finance, insurance and real estate	8	1
I—Services	43	5
J&K—Others	8	1
SIZE OF THE COMPANIES AT WHICH ACCIDENTS OCCURRED		
Total	(2) 794	100
1 to 19 employees	159	20
20 to 49 employees	123	15
50 to 99 employees	120	15
100 to 499 employees	234	29
500 or more employees	158	20

(1) Due to rounding, percentages may not add to 100.

(2) The total of each table represent the number of respondents answering the pertinent question(s) of the survey.

TABLE II.—OCCUPATIONAL DISTRIBUTION

Occupation	Workers	Percent
Total	833	100
Operatives, excluding transport	373	45
Craft and kindred workers	281	34
Laborers, excluding farm	94	11
Service workers, excluding private household	19	2
Clerical and kindred workers	19	2
Managers and administrators	13	2
Professional, technical & kindred	12	1
Transport equipment operators	10	1
Farm laborers and supervisors	8	1
Nonclassified	4	(1)

(1) Less than .5.

Note.—Due to rounding, percentages may not add to 100.

TABLE III.—ACTIVITY OF TIME OF ACCIDENT

	Workers	Percent
WHAT WAS EMPLOYEE DOING?		
Total	833	100
Unjamming object(s) from equipment	250	30
Cleaning equipment	245	29
Repairing equipment	77	9
Performing maintenance (oiling, etc.)	34	4
Installing equipment	13	2
Adjusting equipment	99	12
Doing set-up work	57	7
Performing electrical work	29	3
Inspecting equipment	15	2
Testing material or equipment	2	(1)

(1) Less than 0.5 percent.

TABLE IV.—CIRCUMSTANCES OF INJURIES

	Workers	Percent (1)
HOW DID INJURIES OCCUR?		
Total	833	100
Injured by moving machine part	735	88
Injured by contact with energized electric parts	45	5
Injured by burners, hot liquids or other hazardous materials	29	3
Injured by falling machine parts	10	1
Other	14	2
WAS EQUIPMENT TURNED OFF BEFORE DOING TASK?		
Total	833	100
No	653	78
Yes	180	22
IF EQUIPMENT NOT TURNED OFF, REASON(S) GIVEN.		
Total	(2) 592	(2)
Worker felt it would slow down production or take too long	112	19
Not required by company procedure	69	12
Worker did not know how to	8	1
Did not think it necessary	209	35
Task could not be done with power off	209	35
Worker did not realize power was on	62	10
Other reasons	61	10
IF EQUIPMENT WAS TURNED OFF:		
a. What happened at the time of injury?		
Total	176	100
Injured employee accidentally turned equipment on	20	11
Co-worker accidentally turned equipment on	15	9
Co-worker turned equipment on, not knowing equipment was being worked on	56	32

TABLE IV.—CIRCUMSTANCES OF INJURIES—Continued

	Workers	Percent (1)
Equipment or material moved when jam-up cleared	9	5
Parts were still in motion (coasting)	30	17
Other reason	46	26
IF EQUIPMENT WAS TURNED OFF:		
b. Were additional steps taken to de-energize equipment?		
Total	(2) 160	(2)
No—not necessary	49	31
No—not required by company	23	14
No—would slow down production	8	5
No—worker did not have tools	4	2
No—other reason	20	13
No—reason not given	37	23
Disconnected main power	14	9
Tagged out equipment power controls	6	4
Locked out(3), installed blank flange or removed fuse	3	2
Disconnected electric line	5	3
Drained pressure or hazardous material	9	6
Other	11	6

(1) Due to rounding, percentages may not add to 100.

(2) Because more than one response is possible, the sum of the responses and percentages may not equal the total number of persons who answered the question.

(3) The two accidents which occurred after the equipment was locked out took place because (1) the lockout had been done to the wrong power line and (2) a second power line had been spliced into the wiring beyond the lockout.

TABLE V.—TRAINING

	Workers	Percent
WAS LOCKOUT INSTRUCTION PROVIDED EMPLOYEES?		
Total	554	100
Yes	214	39
No	340	61
IF INSTRUCTION PROVIDED, IN WHAT FORM?		
Total	273	100
Provided printed instructions	25	9
Procedures posted on equipment	37	14
Instruction given as part of on-the-job training	176	64
Formal training given at meeting, etc.	28	10
Other	7	3
WHEN WAS LOCKOUT INSTRUCTION GIVEN?		
Total	(1) 186	(1) 100
After the accident	15	8

TABLE V.—TRAINING—Continued

	Workers	Percent
One to six months before accident	36	19
Six months to a year before accident	28	15
Upon hiring	84	45
Over a year before accident	60	32

(1) Because more than one response is possible, the sum of the responses and percentages may not equal the total. Percentages are calculated by dividing each number of responses by the total number of persons who answered the question.

TABLE VI.—ESTIMATED LOST WORKDAYS

Number of lost workdays	Workers	Percent
Total	793	100
No time lost	107	13
1 to 5 workdays lost	132	17
6 to 10 workdays lost	95	12
11 to 15 workdays lost	75	9
16 to 20 workdays lost	47	6
21 to 25 workdays lost	47	6
26 to 30 workdays lost	60	8
31 to 40 workdays lost	49	6
41 to 60 workdays lost	54	7
More than 60 workdays lost	41	5
No indication of number of last workdays	86	11

B. *Analysis of 83 Fatality Investigations by OSHA's Office of Data Analysis.* The second study examined by OSHA was the compilation of data from 83 fatality investigations conducted by OSHA between 1974 and 1980. This report is entitled, "Selected Occupational Fatalities Related to Lockout/Tagout Problems as Found in Reports of OSHA Fatality/Catastrophe Investigations" [Ex. 3–5]. All of these accidents were identified as having been caused by failure to properly deenergize machines, equipment or systems prior to performing maintenance, repairs or servicing.

Tables VII through IX present tabulations of the results of the OSHA analysis of 83 fatality investigations.

TABLE VII.—CAUSAL FACTORS

Cause	Number	Percent
Total	83	100
Lack of adherence to safe work practices (no procedure or failure to follow procedure)	21	25
Accidental or inadvertent activation	29	35
Failure to deactivate	21	25
Equipment failure	7	8
Other	5	6

NOTE.—Due to rounding, percentages may not add to 100.

TABLE VIII.—NUMBER OF INJURY

Agent	Number	Percent
Total	83	100
Agitators and mixers	12	14
Rolls and rollers	11	13
Conveyors and augers	11	13
Saws and cutters	11	13
Hoists	8	10
Earth moving equipment	6	7
Crushers and pulverizers	4	5
Forges and presses	4	5
Electrical apparatus	4	5
Vehicles	3	4
Other	9	11

TABLE IX.—EMPLOYEE ACTIVITY

Activity	Number	Percent
Total	83	100
Conducting normally assigned duties	69	83
Conducting other duties	14	17

In analyzing the 83 fatality investigation reports and assigning causes to each accident, no attempt was made to draw conclusions or inferences beyond the information contained in the reports. For example, if the employee was killed in operating machinery, unless the report stated otherwise, the cause of the accident was considered to be failure to shut off the machine, rather than a combination of causal factors such as failure to shut off the machine, failure to lockout, failure to document adequate procedures, and failure to provide sufficient employee training. Additionally, if a machine was found to be running, it was assumed that the employee failed to shut off the machine rather than that another employee restarted the machine.

C. *Analysis of 125 Fixed Machinery Fatalities by OSHA's Office of Data Analysis.* A separate study by OSHA's Office of Data Analysis is entitled "Occupational Fatalities Related to Fixed Machinery as Found in Reports of OSHA Fatality/Catastrophe Investigations" [Ex. 3–6]. This study contained an analysis of investigative reports of 125 fatalities involving fixed machinery which occurred between 1974 and 1976, and which were investigated by OSHA. The primary causal factors under which the accidents were classified were operating procedures, accidental activation, lack of machine deactivation, equipment failure, and other causes.

The following is a tabulation of the results of this study.

TABLE X—CAUSAL FACTORS, OSHA ANALYSIS OF 125 FATAL ACCIDENTS

Causal factor	Number	Percent
Total	125	100
Failure to adhere to safe operating procedures	41	33
Accidental machine activation	31	25
Machine not deactivated	23	18
Equipment failure	21	17
Other	9	7

D. *National Institute for Occupational Safety and Health, Guidelines for Controlling Hazardous Energy During Maintenance and Servicing and Study of Hazardous Release of Energy Injuries in Ohio in 1983.* The next studies considered by OSHA were done by the National Institute for Occupational Safety and Health (NIOSH) [Ex. 4 and 2–80c]. In the first, fifty-nine out of a total of 300 accident reports were analyzed to illustrate situations in which adequate control of energy might have prevented the accidents. These case files were selected because they contained sufficient detail to enable NIOSH to evaluate the accidents and determine what countermeasures might have been available to prevent the accidents.

The report indicated that these types of accidents are preventable if effective energy control techniques are available, the workers are trained to use them, and management provides the motivation to ensure their use.

The following is a tabulation of the results of the first study.

TABLE XI.—CAUSAL FACTORS, NIOSH STUDY

Factor	Number	Percent
Total	59	100
Failure to de-energize machine or control energy	27	46
Accidental re-energization	25	42
Ineffective energy isolation	6	10
Disregarding residual energy	1	2

The NIOSH draft report, undated, entitled: "Study of Hazardous Release of Energy Injuries in Ohio in 1983." (Ex 2–80c).

This report contains information on 339 accidents which occurred in the state of Ohio in 1983. These accidents were selected because: (1) They fell into likely categories of industry, occupation, type of accident, source of injury and diagnosis of injury; (2) the worker's compensation claim narrative suggested applicability; and (3) questionnaire reponses by plant officials positively identified the injuries as resulting from an unexpected energy release during equipment repair, servicing or maintenance. The report defined an unexpected or unwanted release of energy "as when a press closes on an operator's hand or when steam escapes from a broken pressure line."

The "Ohio Study" was submitted by NIOSH in draft form. OSHA is not aware of whether the study results have since been finalized by NIOSH, or whether any further effort has been expended to follow-up on its findings. However, OSHA has evaluated the draft study and has determined that few definite conclusions can be drawn from the available data. For example, most of the injuries reported in the study (70%) occurred to production workers as a result of servicing which took place during normal production operations. Although the study indicated that firms where injuries occurred used tagout, it did not indicate whether either tagout or tagout procedures were applied in situations where production employees were performing servicing work, as well as maintenance employees. Without such information, it is not possible to determine whether the tagout procedure failed in situations where it was being applied, or whether tagout (or other type of employee protection, such as shutting down the equipment) was in use at the time of the accident. In addition, the study only considered the issue of locks versus tags, and did not evaluate the other elements of the lockout or tagout programs in place. As OSHA has emphasized, the adequacy of a program for the control of hazardous energy relies on much more than whether a lockout device or a tagout device issued on the energy isolating means. Therefore, the Agency has determined that the draft Ohio study raises many more questions than it answers, and that no solid conclusions can be drawn from the data provided to date. OSHA encourages NIOSH to continue its review and analysis of this study, and looks forward to receiving a final version of the study after a full evaluation and revision has been performed.

The following is a tabulation of the usable results of this study.

TABLE XII—TASK BEING PERFORMED AT TIME OF ACCIDENT

Task	Number	Percent
Unjamming object	84	25
Cleaning equipment	75	22
Repairing equipment	41	12
Adjusting equipment	41	12
Doing set-up work	27	8
Inspecting equipment	11	3

TABLE XII—TASK BEING PERFORMED AT TIME OF ACCIDENT—Continued

Task	Number	Percent
Testing equipment	9	3
Installing equipment	9	3
Electrical work	8	2
Other tasks	34	10
Total	339	100

TABLE XIII.—EQUIPMENT MODE WHEN INJURY OCCURRED

Equipment mode	Number	Percent
Production mode	230	70
Maintenance mode	99	30
Total	(1)329	100

(1) Ten respondents did not identify the equipment mode.

F. *Analyses of Fatality/Catastrophe Reports and General Duty Clause Citations by OSHA's Offices of Experimental Programs and Mechanical Engineering Safety Standards.*

There were two additional OSHA studies which were conducted jointly by the Office of Experimental Programs and the Office of Mechanical Engineering Safety Standards. These studies were compilations and analyses of OSHA Form 36 reports [Ex. 3–7] and OSHA 5(a)(1) citations [Ex. 3–8], respectively.

An OSHA Form 36 (Preliminary Fatality/Catastrophe Event Report) is prepared each time an Area Office is notified of a serious accident resulting either in a fatality or in serious injury to five or more employees that necessitates their hospitalization. This report is used to determine whether or not OSHA will conduct an investigation of the circumstances surrounding the accident. Since OSHA does not receive notification of all accidents resulting in a fatality or catastrophe, the total number of Form 36 reports received does not equal the total number of workplace fatalities and serious injuries which occurred during this study period. However, OSHA believes that the causes of, and the circumstances leading to, the accidents clearly demonstrate the nature and seriousness of lockout/tagout-related accidents.

The OSHA Form 36 study which analyzed data reported during the period 1982–1983 [Ex. 3–7], utilized a list of 443 fatalities. From these fatalities, all of which occurred in industries subject to the present regulations, it was determined that 36 (8.1 percent) would have been prevented by the use of an effective lockout or tagout procedure.

The second study [Ex. 3–8] used information developed by OSHA's Office of Mechanical Engineering Safety Standards which identified, categorized and recorded "general duty clause" (section 5(a)(1) of the OSHA Act) citations from 1979 to 1984. A general duty clause citation is issued when, during an inspection, a "recognized hazard" is detected which is causing or is likely to cause death or serious physical harm to an employee, but which is not addressed in an OSHA standard applicable to that industry.

The citations in the latter study have been broken down between maritime, construction, and general industry. The general industry citations were further subdivided to reflect the nature of the hazard which the citation addressed, such as hazardous materials or material handling. When there was special Agency interest in an industry or hazard, the citations were further broken down by industry sector (such as oil and gas well drilling).

From 1979 through 1984, 3,638 inspections were conducted which resulted in the isuance of general duty clause citations. Of these 3,638 inspections, there were 376 inspections in whcih the failure to control hazardous energy was cited. Hence, in approximately 10 percent of all inspections which resulted in the issuance of at least one General Duty clause citation, herein referred to as a 5(a)(1) citation, failure to lockout or tagout was identified. [Ex. 3–8]

The following is a tabulation of the breakdown of lockout citations by industry division.

TABLE XIV.—INDUSTRY PROFILE, OSHA 5(a)(1) LOCKOUT CITATIONS

Industry divisions	Number of citations	Percent
Total	376	100
A—Agriculture, forestry and fishing	2	.5
B—Mining	4	1.1
C—Construction	18	4.8
D—Manufacturing	310	82.4
E—Transportation and public utilities	11	2.9
F—Wholesale trades	14	3.7
G—Retail trades	5	1.3
H—Finance, insurance and real estate	0	0
I—Services	12	3.2
J—Public administration	0	0
K—Not otherwise classified	0	0
Unknown	0	0

Note.—Due to rounding, percentages may not add to 100.

At the hearing, the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) testified that there were 74 fatalities which it referred to as "lockout fatalities," which had occurred to its members between 1973 and 1988 (Tr. H253). In response to requests at the hearing, the UAW provided additional information on these fatalities (Ex. 49E). (The number of "lockout fatalities" was revised to 72 in the post-hearing submission.) The post-hearing data reinforce OSHA's determination that fatalities from hazardous energy sources involve more than simply a failure to "lock out" machines or equipment. Of the 72 fatalities, UAW reported that there had been "inadequate training" in 49 cases (68%); "inadequate procedures" in 50 cases (69%); and "adequate, but unenforced procedures" in 19 cases (26%). Although OSHA agrees that lockout provides more security against reenergization of equipment than tagout, the Agency is convinced more than ever that there is much more to energy control than the question of lockout vs. tagout. The UAW data make a strong case for the need for OSHA to provide for proper energy control procedures and adequate training in those procedures.

In the proposal, OSHA estimated, based on BLS data, that lockout or tagout related fatalities represented 7% of the total number of occupational fatalities. In their post-hearing comment, the UAW indicated that for their workers, this figure is estimated to be 26%, and that OSHA should take this larger estimated percentage into account in its projections. The UAW also argued that its data base is larger than that used by OSHA, and that it is more reliable because of its national scope and inclusion of both large and small facilities. (Ex. 49A). OSHA appreciates the time and effort taken by the UAW in compiling such data and in submitting it to the rulemaking record. At the time of the proposal, the Agency acknowledged that its injury and fatality figures were likely to be understated for various reasons. Regardless of whose figures are used, there is little doubt that the failure to control hazardous energy sources exposes employees to a significant risk, and that this standard is necessary to reduce those risks.

IV. Basis for Agency Action

OSHA believes that there exists a sufficient body of data and information upon which a reasonable standard can be based to reduce the number of fatalities and injuries resulting from failure to utilize proper and adequate practices and procedures for the control of potentially hazardous energy. This position is based upon an analysis of the accident data available to OSHA, all of

which is in the docket of this rulemaking proceeding.

Most accident reports break down the relevant information in accordance with the classifications contained in the American National Standards Institute, ANSI Z16.2, "Method of Recording Basic Facts Relating to the Nature and Occurrence of Work Injuries" [Ex. 3-11]. These classifications are: The nature of the injury, part of the body, source of the injury, accident type, hazardous condition, agent of injury and unsafe act. Many accident reports are generated primarily to document the occurrence of accidents and concentrate on the information which is necessary to process workers' compensation claims. For this reason, they tend to emphasize information about the injury rather than the events and conditions which caused the accidents. Therefore, most of the pertinent information identifying the nature and extent of the problem of controlling hazardous energy was gathered by OSHA by conducting the special studies referred to above. Because of the limitation on the available data, no single study in itself can be expected to provide conclusive support for comprehensive regulation of energy hazards. However, the studies and other available data, when considered as a whole, clearly indicate not only the scope and extent of the problem, but also the need for a comprehensive standard. The studies are consistent in their demonstration of the causative factors involved in lockout-related accidents, and they provide strong evidence for the potential effectiveness of OSHA's Final Rule in dealing with those factors.

OSHA believes that the hazards associated with the failure to control hazardous energy are widespread. The following table indicates the distribution, by industry, of the accidents reported in the Bureau of Labor Statistics (BLS) Work Injury Report Study (WIR) and in the OSHA 5(a)(1) study citations discussed earlier.

TABLE XV.—INDUSTRY PROFILE, BLS WIR AND OSHA 5(a)(1) CITATIONS

Industry (by division)	BLS	Percent	5(a)(1)	Percent
Total	833	100	376	100
A—Agriculture, forestry and fishing	12	1	2	.5
B—Mining	1		4	1.1
C—Construction	35	4	18	4.8
D—Manufacturing	619	74	310	82.4
E—Transportation and public utilities	19	2	11	2.9
F—Wholesale trades	57	7	14	3.7
G—Retail trades	31	4	5	1.3
H—Finance, insurance and real estate	8	1	0	0
I—Services	43	5	12	3.2
Other or unknown	8	1	0	0

Although employees in almost every industrial division are exposed to the hazards associated with the unexpected energization or start up of machines or equipment, or by the unanticipated release of stored energy, the preponderance of the accidents and injuries occur in Manufacturing (Division D). It should also be noted that Services (Division I), includes many employers who perform maintenance on equipment in manufacturing and other sectors covered by Part 1910.

In addition to the accidents which could occur when maintenance or servicing is being conducted, OSHA also identified some accidents which could occur while employees are lubricating, cleaning, unjamming or adjusting machines or equipment. These activities differ from other activities which are conducted during normal operation in that these activities can lead to the unexpected release of energy and are usually done only on an as-required basis. When these activities are being conducted during normal operations, the machine guarding required by other OSHA standards (that is, § 1910.212 for point of operation guarding and § 1910.219 for power transmission apparatus guarding) may afford the necessary and sufficient protection for the employees performing those activities. However, in many instances the employee must either remove guards or other safety devices or work under unusual circumstances which would subject the employee to a different or greater risk than would be encountered during normal production operations. In those instances OSHA believes that the machine or equipment must, if possible, be shut down and locked or tagged out to protect the employee from injury.

As noted earlier, OSHA's has evaluated section 5(a)(1) citations that were issued for failure to control hazardous energy, and has determined that this area accounts for about 10 percent of the serious hazards not presently covered by a specific OSHA standard. The seriousness of the hazard to be addressed by this standard is highlighted by the fact that section 5(a)(1) citations are issued only for recognized hazards which cause or are likely to cause death or serious physical harm. Similarly, the OSHA Form 36, also discussed above, is initiated only when OSHA is notified of deaths or multiple hospitalizations. Further analysis of the lost workday data from the BLS WIR indicates that the severity of injuries from failure to control hazardous energy sources (an average of 24 lost workdays per lost time injury) is much higher than the national industry-wide average of 16 lost workdays [Ex. 14].

In developing this Final Rule, OSHA has estimated the total numbers of fatalities, lost-workday injuries, and minor injuries attributable to lockout-related accidents. These estimates were based on an extrapolation of the available national data sources discussed earlier [Ex. 3, 5, 6, 7]. From these data the number of preventable accidents was determined. OSHA believes that the Final Rule will prevent 85% of the total numbers of injuries or fatalities from exposure to hazardous energy in the workplace. The Agency estimates that approximately 31,900 minor (non-lost-workday) injuries; 28,400 lost-workday injuries; and 122 fatalities per year (based on 1984 accident levels) will be prevented by this standard. (see Section on Regulatory Impact Analysis below). These estimates were derived by identifying the percentage of accidents in various data sources which were determined to be lockout-related and applying those percentages to the number of accidents. It was determined that two percent of all nonfatal accidents and 7.1 percent of all fatalities occurring in general industry related to failure to adequately control hazardous energy. In addition, the data indicate that the risk of accidents and injuries is independent of the number of employees in a particular workplace. This finding is predicated upon the distribution by size of the companies which employed the injured employees surveyed in the BLS WIR. In the survey, almost as many respondents (392, or 49 percent) reported that they were employed at facilities of 100 or more employees as those who were employed at facilities of less than 100 employees (402, or 51 percent).

Based upon analysis of all of the aforementioned evidence, OSHA believes that the failure to control hazardous energy results in a significant risk to employees. Further, the data clearly demonstrate that the consequences of an accident involving failure to lockout or tagout are more severe in terms of lost workdays than the average industrial accident. OSHA also believes that a significant risk from hazardous energy extends across many segments of general industry.

OSHA has also analyzed the studies to determine the underlying causes of the conditions which existed when lockout related accidents occurred. From this information, OSHA developed a list of measures which would have prevented most of the accidents in the studies, and used this list to devleop its proposed standard. It should be noted that the studies vary widely in the quantity and quality of the information provided for the reported accidents (different methods of reporting, and incompleteness of the findings of the causes of the accidents, for example). Therefore, professional judgment was used in the interpretation of the results of the studies, in order to provide a comprehensive evaluation of the data and to correlate the information on accident causation. While the numbers and percentages from all studies do not necessarily agree, the studies all indicate the existence and seriousness of the problems, and provide valuable information as to measures that are necessary to correct the problems. Tables XVI through XX below cover what OSHA believes are the major causal factors in lockout-related accidents, and indicate the prevalence of such factors as reflected in the different accident studies.

TABLE XVI.—SERVICING ACCIDENTS OCCURRING WHILE EQUIPMENT IS OPERATING

Study (total considered)	Number	Percent
BLS WIR (833)	653	78
OSHA analysis of 83 fatalities (83)	54	65
OSHA report of fixed machinery (125)	23	18
NIOSH study (59)	27	46

The reasons most often given in the BLS WIR for not turning off equipment prior to servicing were that it would take too long or slow down production; it was not required by the employer; it was not necessary; or the task could not be done with the equipment off.

As pointed out in the Hazards section of this Notice, just shutting off a machine, equipment or process may not completely control the hazardous energy. Even after a machine, equipment or process is shut down, residual energy may still be present in the form of moving components, spring or hydraulic pressure, the force of items which have become jammed in machine parts, or the energy which is stored in machine, equipment, or system components due to their position (potential energy).

TABLE XVII.—ACCIDENTS DUE TO FAILURE TO ENSURE POWER OFF

Study (total considered)	Number	Percent
BLS WIR—Failure to check for power on (592)	62	10
OSHA analysis of 83 fatalities (83)	5	6
NIOSH study (59)	6	10

The Hazards section of this Notice also discussed the fact that even though the machine, equipment or process has been shut down, and the residual energy controlled or dissipated, an employee can still be injured if the machine, equipment or process is restarted by either that employee or another employee. Injury can occur when an employee inadvertently contacts switches, valves or other controllers or when an employee activates the equipment without recognizing the reason it was shut off, inadvertently exposing other employees to a hazard.

TABLE XVIII.—ACCIDENTS DUE TO INADVERTENT ACTIVATION

Study (total considered)	Number	Percent
BLS WIR (176)	91	52
OSHA analysis of 83 fatalities (83)	29	35
OSHA report on fatalities related to fixed machinery (125)	31	25
NIOSH (59)	25	42

Clearly, it is insufficient simply to shut off machinery to conduct repair, maintenance or servicing. OSHA believes that some means must be utilized to ensure that employees are safeguarded during those operations.

After servicing, there is also the need to ensure that all guards have been replaced, that all tools and other extraneous materials have been removed from the machine, equipment or process, and that reenergizing and starting normal productions operations will not subject an employee to an increased potential for injury. This is especially true when the maintenance, repair or service is conducted at or near an employee's workstation.

OSHA believes that many of the problems of de-energization and reenergization of machines or equipment can be reduced by the employer's development and utilization of a program which incorporates a program which incorporates a standardized procedure for servicing/maintenance operations. The procedure would outline the necessary steps to be taken to prepare for, conduct, and complete servicing of equipment, and the program would provide employees with an understanding of the procedure and the reasons why it must be followed. A program can provide the details to be followed in performing servicing operations safely (the procedure), together with the training and motivation needed to assure that employees understand and implement those details.

TABLE XIX.—ACCIDENTS ATTRIBUTABLE TO EMPLOYER NOT HAVING OR EMPLOYEES NOT UTILIZING A PROCEDURE

Study (total considered)	Number	Percent
BLS WIR (653)	482	74
OSHA report on fatalities related to fixed machinery (125)	41	33

OSHA believes that employee understanding and utilization of a standardized procedure are critical to the success of a lockout or tagout program. Without these elements and commitment from management, the effectiveness of the program can be seriously compromised. Proper training in the procedure, and explanation of how it works and why, are crucial to its implementation by the employees. Even though there can be no exact quantification of the effects of training employees, the BLS WIR Study gives an indication of the effect of the *lack* of training in the necessary measures to be taken in deenergizing machines or equipment (see Table XX below).

TABLE XX.—LOCKOUT TRAINING OF INJURED EMPLOYEES, SOURCE: BLS WIR (FROM 613 RESPONSES)

Type of training	Number	Percent
Printed instruction	25	4
Procedures posted on equipment	37	6
Training at job orientation, at meetings, or otherwise	211	34
No training	340	55

Of those injured employees who had received training, 15 stated that their training had occurred *after* their accident. Additionally, 60 employees stated that they had received their training more than a year prior to the accident. Even though training has been provided at some time during employment, the length of time between the receipt of the training and the accident is a limiting factor on any beneficial effect that has been derived from the training. In the Final Rule,

discussed below, OSHA recognizes the need for remedial or refresher training of those employees who must use the procedure, and that such retraining must be conducted at least annually.

Based upon an analysis of the rulemaking record, OSHA believes that the safe performance of activities such as repair, maintenance and servicing, requires the deenergization of machines or equipment whenever feasible. Further, in order to ensure that maintenance or servicing activities are conducted safety, a lockout or tagout procedure must be utilized. This procedure must call out the steps to be taken to deenergize the machine, equipment or process; to ensure that the deenergization is sufficiently complete; to dissipate or prevent the release of residual energy; to ensure that the machine, equipment or process cannot be reenergized accidentally or unexpectedly; and to ensure that the reenergization is accomplished safely. The establishment and utilization of this procedure must be coupled with sufficient initial and follow-up training to ensure the successful utilization of the procedure.

V. Major Issues

The evidence submitted to the record is summarized and evaluated in the following discussion of each major issue and in the Summary and Explanation of this Final Rule. The numbers in brackets refer to specific written comments (Ex. —) and to the transcript page number of the testimony presented at the public hearing (Tr. p. (W for Washington, DC and H for Houston, TX) —).

1. Should OSHA require the use of locks, locks and tags, or tags alone to control potentially hazardous energy?

The most vigorously contested issue was the need to use locks or tags as the primary means to prevent the accidental operation of energy isolating devices, such as electrical disconnects, hydraulic or pneumatic valves. The proposed standard did not establish definitive criteria for employers to use in making their choices of control measures, that is, the use of locks, tags or a combination of the two.

In general, a strong preference was evidenced in the comments and hearing testimony for locks. Many parties to this proceeding (Ex. 2–2, 2–12, 2–27, 2–29, 2–42, 2–44, 2–57, 2–63, 2–66, 2–67, 2–79, 2–98, 2–99, 2–103, 2–104, 2–106, 49, 50, 58, 59, 60, 62, 63, Tr. pg. W1–68, W1–71, W1–85, W1–138, W1–141, W1–143, W1–185, W1–192, W1–233, W1–241, W1–249, W2–80, W2–91, H30, H69, H96, H129, H136, H142, H149, H153) stated that the use of locks was the only acceptable means to control hazardous energy. Some of these commenters (Ex. 2–2, 2–44, 2–63, 2–79, 2–98) argued that the use of tags alone did not afford a minimum acceptable level of protection for employees since, as opposed to locks, they could be carelessly bypassed without major effort. Several commenters (Ex. 2–27, 2–29, 2–63, 2–104, Tr. pg. W1–75, H–225) stated that the unrestricted use of tags as the primary means of safeguarding employees during maintenance or servicing of machines and equipment would seriously erode the gains which had been achieved through past labor-management negotiations. Other commenters (Ex. 2–44, 2–57, 2–63, 2–79, 2–98, 2–99, Tr. pg. W1–71, W1–72, H–226) stated that tags were susceptible to being lost or damaged in use due to environmental conditions in the workplace or by contact by employees, materials or equipment moving or being moved about the workplace. These commenters stated that tags only "warn" and that they are a label, not a safety device. Other commenters (Ex. 2–106, Tr. pg. W1–72) stated a view that, the use of tags also promotes a false sense of security among employees and that the accident rate when tags alone are used is higher than when not using any safeguard.

One participant, an employee of Armco Steel (Tr. pg. W2–91), stated that his employer had discontinued the use of tags in favor of locks. He contended that the Company realized that the use of tags alone was not effective in preventing accidents.

Finally, several commenters (Ex. 2–42, 2–79, 2–98, 2–106, Tr. pg. W1–72, W1–138, W1–140, H98, H129, H163) stated that tags can be easily defeated by negligence or ignorance and that the use of tags will not deter the willful misconduct of the employee who would ignore the message of the tag, that is, not to reenergize or restart a machine or piece of equipment.

The record contains a significant body of evidence which indicates that the "one person, one lock, one key" concept enjoys wide acceptance across industry lines. For example, the United Auto Workers provided comments (Ex. 2–24, 20) and testimony (Tr. pg. H215–354) on the use of this concept in the automotive industry. Monsanto Company stated (Ex. 3–52, attachment II) that this form of lockout protection represented their basic approach to lockout/tagout. Monsanto indicated that tagout is only used in situations "where the work is relatively low hazard and the person is in control of the energy source," such as light switches, some valves, and some plug and cord connected equipment. Monsanto also noted that group lockout is used for equipment which requires a relatively large number of servicing workers, with a large number of points to be locked out.

On the other hand, several commenters (Ex. 2–33, 2–55, 2–94, 2–96, 2–102, 2–105, and Tr. pg. W1–144, H197) stated that their companies utilize a system of tags to ensure that equipment which has been shut down will not be reenergized or restarted. One of these commenters (Tr. pg. H198) stated that the tagout system utilized by his company is "well understood by all employees. In fact, we feel so strongly about our red/danger tag procedures that we require mandatory discipline for its violation." The company submitted its safety record as support for its assertion that its tagout program is effective. The employees of this company have worked over 488 million hours between January 1980 and September 1988 with only 130 lost time accidents. Of those 130 accidents, only one occurred which was marginally related to tagout. That one accident occurred because there was no valve to guard against the transfer of heat through another closed and tagged valve. Finally this commenter stated, "The key to safety is not in a specific device, be it tag or lock. [Safety] rather, lies in good procedures and careful training combined with assurance of accountability. If these three principles are in place, a system which uses tags only will adequately protect employees. A lockout requirement in addition to tagout will not assure greater safety." (Tr. pg. H199.)

Even 2 commenters (Ex. 2–67, Tr. pg. W1–75, W1–167), who spoke out against the use of tags admitted that there might be instances in which lockout would be either impractical or impossible. However, one commenter (Tr. pg. W1–97) stated that problems, such as the loss of computer memory by shutting off automated equipment, could be overcome. Retention of the computer memory could be accomplished by providing a separate energy source for the computer so that the energy used to power the movable portions of the mechanism could be shut off and locked out without affecting the computer memory. This commenter stated that other innovative means are possible for solving other similar problems.

Other commenters (Tr. pg. W1–139, W1–157) stated that there is no data available on accidents which have occurred when machines or equipment are tagged out.

Several commenters (Tr. pg. W1–105, W1–139, W1–164) suggested tagging should be used only with an increased

emphasis on training, supervision, controlled access and employer commitment.

Much of the testimony and comment received in this rulemaking has focused on whether the standard should require lockout as opposed to the proposed approach of allowing lockout or tagout. In a sense, it was unfortunate that attention was focused more on a single aspect of the standard, though it is certainly an important one, than on the standard taken as a whole. The proposed standard was intended to specify that the employer provide a comprehensive set of procedures for addressing the hazards of unexpected reenergization of equipment, and the use of locks and/or tags was intended to be only a single element of the total program. In order to provide adequate protection to employees, the Final Rule, as did the proposal, requires employers to develop and utilize a comprehensive energy control program consisting of the development and utilization or procedures and training of employees. The procedures must consist of steps for deenergization of equipment, isolation of the equipment from energy sources, and verification of deenergization before servicing and maintenance is performed on equipment, and the employees who either perform the servicing or maintenance or are affected by those operations must be properly trained in the energy control procedures which apply to their work.

It should be noted that locks and tags by themselves do not control hazardous energy. It is the isolation of the equipment from the energy source and the following of the established procedures for deenergization and reenergization of the equipment that actually controls the energy. Locks and/or tags are attached to the disconnects and other energy isolating mechanisms after the machine or equipment has, in fact, been isolated, in order to prevent them from being reenergized before the work has been completed. If the equipment has not been properly deenergized, and if proper procedures have not been followed, neither a lock nor a tag will provide protection.

The treatment of lockout vs. tagout presents OSHA with a difficult regulatory dilemma. On the one hand, if the issue were simply whether a lock or a tag will be better able to prevent equipment from being reactivated, there is no question that a lock would be the preferred method. Locks are positive restraints which cannot be removed (except through extraordinary means such as bolt-cutters) without the use of a key or other unlocking mechanism. By contrast, the limitations of tags used alone are self-evident: They do not serve as positive restraints on energy isolating devices, but are only warnings to employees that the equipment is not to be reenergized. Tags not fastened with a strong material can become detached from the energy isolating device by wind or other environmental conditions, and the legend on some tags can be rendered illegible if the tag becomes wet. Tags may not provide protection if there are affected employees who do not read English or who have not been properly trained in the tagging system and its implementation.

However, the issue in this rulemaking is not merely on the use of lockout vs. tagout, but rather the use of locks and/or tags in a comprehensive program of energy control. As was noted in the preamble of the proposed rule (53 FR 15496, April 29, 1988), OSHA is aware of workplaces in which tagout systems are used with great effectiveness. In particular, various electric utilities and chemical plants report that they have used tagout in lieu of lockout successfully for many years (cf. Tr. H194–214; W2.2–3—2–39). In evaluating these industries, OSHA has determined that there are several factors which have contributed to their successful use of tagout programs: first, these companies have implemented detailed energy control procedures which are quite similar to those set forth in both the proposed and final lockout/tagout standard; second, they have established and utilized extensive training programs to teach their employees about their energy control procedures, including the use of tags and the importance of obeying them; third, these companies reinforce their training periodically. However, it is the fourth common element, discipline, which appears to be the most critical to the success of these programs; the companies with effective tagout programs apply various types of disciplinary action to both supervisors and employees who violate the tagout procedures.

OSHA believes that an effective tagout system needs all four of these elements to be successful. However, it is the fourth element, discipline, which is the most difficult to incorporate into a regulatory approach in the Final Rule. Not surprisingly, it also reflects the most serious limitation of tagout which does not arise with lockout. Because a tagout program does not involve positive restraints on energy control devices, it requires constant vigilance to assure that tags are properly applied; that they remain affixed throughout the servicing and maintenance of equipment; and that no employee violates the tag by reenergizing the equipment, either intentionally or inadvertently, before the tag is removed. By contrast, a lockout device, once applied, cannot inadvertently be removed, and cannot be removed intentionally by an unauthorized person except by the use of force.

In the Final Rule, OSHA has determined that lockout is a surer means of assuring deenergization of equipment than tagout, and that it should be the preferred method used by employees. However, the Agency also recognizes that tagout will nonetheless need to be used instead of lockout where the energy control device cannot accept a locking device. Where an energy control device has been designed to be lockable, the standard requires that lockout be used unless tagout can be shown to provide "full employee protection," that is, protection equivalent to lockout. These requirements will be discussed in detail in the summary and explanation of the standard, below.

The Agency believes that except for limited situations, the use of lockout devices will provide employees with a more secure and more effective means of assuring that equipment will not be reenergized while they are working on it. To the extent that equipment is capable of being locked out during servicing or maintenance, OSHA believes that it should be locked out. It should be noted, in this regard, that a number of General Industry standards, such as § 1910.305(j)(4) in Subpart S-Electrical, presently require electrical disconnects to large motors to be capable of being locked out.

According to OSHA's Regulatory Impact Analysis, approximately 90% of all electrical energy isolating devices (disconnects) and about ⅔ of all energy control valves are currently capable of being locked out. As previously discussed, the capability for lockout does not necessarily mean that the equipment has an actual hasp or other physical attachment point for a lock. For example, the use of chains can be an effective means of facilitating lockout of many types of valves, even if the valve does not have a specific locking point. Many examples of equipment which was made lockable with minor modifications have been provided to the record. For equipment of this type, OSHA believes that the lockout capability should be used in order to maximize the protection afforded by this standard.

OSHA also acknowledges that certain types of energy isolating devices currently in place are not capable of

being locked out. Such equipment would need to be replaced with or modified significantly to accept locking-type mechanisms in order to become capable of being locked out. This equipment constitutes a relatively small percentage of all equipment to be covered by this standard, and will primarily involve valves rather than electrical disconnects. OSHA believes that where equipment replacement and major equipment modification would be necessary for the equipment to accommodate a lockout device, such efforts are most effectively and efficiently achieved as part of the normal replacement cycle for the equipment, rather than through a specific requirement for retrofitting within a set time frame in this standard. OSHA believes that it is much more cost-effective and protective to design a locking capability into equipment than it is to perform a major retrofitting of that equipment solely to incorporate lockout, for several reasons. First, there are situations in which locking out of equipment can create other, and sometimes greater, hazards to employees. The retrofitting of such equipment for the sole purpose of incorporating a lockout capability would not necessarily deal with the additional hazards. By contrast, the incorporation of a lockout means into the design of new equipment is far less costly than modifying equipment which was not designed to be locked out. Third, incorporating a lockout capability into either new or overhauled equipment is a far less complex task from a technological standpoint, since the locking aspect is a small part of the overall design.

Surprisingly, although there was considerable evidence submitted on equipment for which lockout is currently being used, this rulemaking provided OSHA with little new information on the costs or feasibility of extending lockout requirements to equipment which is not currently capable of being locked out. Therefore, OSHA is unable to conclude with any degree of certainty that a requirement to retrofit all such equipment would be feasible, nor is the Agency able to determine the amount of time or resources that would need to be expended to achieve compliance. For such equipment, OSHA will allow employers to use the less restrictive tagout programs, but only until the equipment is replaced, or until major rehabilitation or modification is performed on it. At that time, the new, overhauled, or modified equipment must be equipped with lockout-capable energy isolating devices, and the energy control procedure for the servicing of that equipment must be revised to make use of that capability, except if the employer can demonstrate that tagout will provide equivalent protection.

OSHA is confident that this standard is a cost-effective approach to providing protection against hazardous energy sources. It recognizes that lockout is, in general, preferable to tagout as a method of assuring that deenergized equipment is not inadvertently or accidentally reenergized. It requires that the employer develop and implement an energy control program and procedure for servicing and maintenance of machinery and equipment, using lockout or its equivalent on the great majority of energy isolating devices, namely those which are currently capable of being locked out. For energy isolating devices which do not yet have a lockout capability, the standard allows the interim use of tagout, but lockout-capable energy isolating devices must be installed when that equipment is replaced or overhauled. The standard is written in performance-oriented language, providing considerable flexibility for employers to tailor their energy control programs and procedures to their particular circumstances and working conditions. OSHA is confident that this standard will greatly reduce the toll of injuries and fatalities which occur each year from the failure to control hazardous energy in general industry workplaces.

A critical element of this standard is the determination of whether an energy isolating device is "capable of being locked out." In its most limited sense, a device would be considered to be "capable of being locked out" either if it was designed with a hasp or other integral part to which or through which a lock could be affixed, or if it has a locking mechanism built into it. However, OSHA's use of the term for the purposes of this standard is somewhat broader, without being overly expansive. OSHA considers equipment to be capable of being locked out if the use of a locking mechanism will not require the employer to dismantle, rebuild, replace, or alter in a permanent way the energy control capability of the isolating device. For example, although some valves and other energy isolating devices are not designed with an integral means of being locked, they can be secured with chains, blocking braces or wedges, which then can be locked. Because extensive equipment modification is not needed in this situation, OSHA views this type of lockout to be both technologically and economically feasible. However, a specific energy isolating device is not considered as having the capability of being locked out if the device is installed within a single cabinet, enclosure or cutout box containing several other energy isolating devices or valves and where the only preventing access to the energy isolating device or valve can be locked out individually, tags must be used and must be attached to the specific energy isolating device and not simply attached to the cabinet or enclosure door or cover. By contrast, as noted earlier, some types of valves and disconnects would require total or partial replacement in order to provide the equipment with a lockout capability.

2. Should OSHA require employee participation in the development of lockout procedures and the training programs required by this standard?

There was considerable comment on the part of labor unions (Ex. 2–29, 2–44, 2–63, 60) and other commenters (Ex. 2–92, 2–97) that OSHA should require that employees and employee representatives participate in the formulation and implementation of lockout programs (compliance plans, procedures, persons to conduct inspections, education and training programs and materials). These commenters also stated that any comments by employee representatives should be incorporated into the training programs. One commenter (Ex. 2–63) stated, "The standard does not prescribe worker participation in program design and training which is essential to an effective program." Another commenter (Ex. 2–97) stated, "Procedures cannot be written in a vacuum and must be accepted by employees, training must be appropriate and up-to-date for the situation." Finally, one commenter (Ex. 2–97) stated, "An effective lockout program must provide for employee participation and their representatives in program design and training."

OSHA has determined that a specific provision dealing with employee participation in the development of the employer's lockout or tagout procedure is not necessary for the effective implementation of the Final Rule. For standards dealing with exposure to toxic substances and harmful physical agents under section 6(b)(5) of the OSH Act, section 8(c)(3) of the Act spells out specific requirements for employee involvement in compliance activity. In particular, it requires that employees or their representatives have the opportunity to observe air monitoring and to have access to monitoring records. By contrast, there is no such specific statutory mandate for the

present standard. Although OSHA agrees that active employee involvement may enhance understanding and cooperation, the Agency believes that it would be inappropriate to require such involvement in this standard. The standard sets out the procedures and steps which the employer must take to establish and implement an effective procedure for controlling hazardous energy, and under the OSH Act, it is the employer who is responsible for complying with the standard.

3. Should OSHA change the scope and application statements of this standard in this Final Rule to cover construction, maritime, agriculture, electric utility, and oil and gas well drilling industries?

In the Notice of Proposed Rulemaking for the standard on the control of hazardous energy sources (Lockout/Tagout) (53 FR 15496, 29 April 1988), OSHA proposed exempting the construction, maritime and agricultural industries. In the preamble of the proposed rule, OSHA explained that the exemption of these industries was based upon their unique situations and work practices which would unduly complicate the development of a generic energy control standard for general industry. For example, the longshoring and the construction industries are generally characterized by casual (short term) employment which may last just until the project for which the employees were hired is completed. The project may involve the erection of a single building or the loading or unloading of a single vessel. Even on longer duration construction projects, the various tasks, such as steel erection or brick laying, are usually of relatively short duration. One commenter (Ex. 2–80), in discussing the need for regulation of the construction industry, pointed out the difficulty of providing adequate training of a transient workforce. Likewise, the agricultural industries can be characterized as ones which have more rapidly changing employment. For example, agricultural harvesting (and its employment of migrant workers) and the use of harvesting machines are limited to those times when crops are ready to be harvested.

Of additional concern in the imposition of regulations in the construction industry is the uniqueness of the earthmoving equipment, such as lattice boom mobile cranes, front-end loaders, bulldozers, scrappers and dump trucks. As opposed to maintenance on automobiles, buses and over-the-road trucks where removal of the ignition key usually ensures that the engine can not be started and the vehicle may be worked upon, some of the maintenance of the above mentioned earth moving equipment involves the positioning of components, such as buckets, blades and machine body parts, which present extraordinary hazards to maintenance or servicing personnel. These hazards and the means to minimize the potential for injury to employees involve additional considerations, which were not adequately addressed during the course of the rulemaking proceeding.

Because of the unique nature of these industries, their respective workforces and working conditions, OSHA believes that this Final Rule might need considerable modification in order to provide optimal protection to employees. In particular, OSHA is concerned with the effectiveness of the basic approach of this standard when applied to a workforce which is highly transient. The energy control procedure may vary widely from one workplace to another, and an employee in construction, for example, may find him/herself in several workplaces during the course of a single year. Similarly, the Agency will evaluate means by which the training requirements of this standard could be modified to reflect these conditions.

The Agency currently intends to consult with the Advisory Committee for Construction Safety and Health (ACCSH) on a proposed lockout-tagout standard for construction under section 107 of the Construction Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333. In addition, for the maritime industry, OSHA intends to present these matters to the Shipyard Employment Standards Advisory Committee (SESAC) for consideration as part of that Committee's review of shipyard standards in part 1915.

OSHA has determined that the Final Rule will cover General Industry, but will not be expanded to cover construction, maritime and agriculture at this time. The Agency has inadequate information at this time on both the hazards of lockout or tagout and the appropriateness of this standard's approach in those industry sectors. However, the Agency will continue to review information on these sectors and will evaluate the need to initiate further rulemaking and will consider whether this Final Rule, or an appropriate modification of same, should be used as the basis for a proposal for construction, maritime and agriculture.

There are several commenters (Ex. 2–27, 2–49, 2–57, 2–76, 2–79, 2–99, 2–106, 60), who were opposed to exempting any industry. Their concern was that the hazards associated with failure to lockout during the maintenance or servicing of machines or equipment were not restricted to a single industry or group of industries. It is their contention that this standard should have universal application. On the other side of the question, there was one commenter (Ex. 2–58) who agreed with the exclusion of these industries.

It should be noted that OSHA's electrical standards for construction (29 CFR part 1926, subpart K), which were revised on July 11, 1986 (51 FR 25318), currently contain various requirements for deactivating equipment, deenergizing electrical circuits, and limiting employee access to energized parts in construction work (e.g., §§ 1926.403(j), 1926.416, 1926.417). Similarly, OSHA's shipyard and marine terminal standards (29 CFR parts 1915 and 1917, respectively) include many provisions which address deenergization of equipment during servicing of equipment on vessels and in marine terminals (e.g., §§ 1915.162–.165, 1915.181, 1917.48(i), 1917.151(b).

Based on its experience in regulating construction and maritime employment, OSHA believes that a generic energy control standard would likely be applied quite differently in these areas than in general industry. Further, the interrelationship between a generic rule and the specific provisions currently applicable to these industry sectors must be considered. In its consultations with its advisory committee on construction and shipyard employment, OSHA will seek guidance on whether a generic rule would be appropriate for these industries; on what areas in which such a rule should differ from the general industry standard being issued today; and on the reasons for any such differences.

OSHA is no less concerned with the safety of these other employees. However, delaying the promulgation of this generic, general industry standard to examine all the unique aspects of these other industries would further delay the promulgation of this standard. There were five commenters (Ex. 2–22, 2–26, 2–45, 2–52 and 2–81) who recommended the exclusion of the natural gas transmission industry from the scope of this standard. Their contention was that OSHA would be preempted under section (4)(b)(1) of the Act from enforcement of this standard since the U.S. Department of Transportation has regulations affecting the gas transmission industry. Section (4)(b)(1) of the Act states:

> Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies and State agencies, acting under section 274 of the

Atomic Energy Act of 1954, as amended (42 U.S.C. 2021), exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.

OSHA recognizes the possibility that its lockout or tagout standard may be preempted under section 4(b)(1) of the OSH Act by other Federal agency actions, such as regulations issued by the Department of Transportation's Division of Pipeline Safety. Section 4 (b)(1) provides that when another Federal agency exercises statutory authority over working conditions, that exercise of authority will preempt OSHA from covering those same working conditions. However, OSHA declines to incorporate a specific provision on preemption into this standard for two reasons: first, whether or not preemption takes place for a given working condition is a matter of law, to be evaluated in a case-by-case determination. Second, even in the event that preemption takes place, if the preempting agency were to choose to revoke its regulations or other exercise of authority, there would no longer be any preemption. Inclusion of a preemption provision by OSHA in a particular safety or health standard would inappropriately prevent OSHA from asserting its authority under the OSH Act in that situation.

There were five commenters (Ex. 2–21, 2–36, 2–40, 2–46 and 2–50–20), who discussed the application of this standard to the petroleum industry. Four of those commenters (Ex. 2–21, 2–36, 2–40 and 2–46) stated that OSHA should not try to "force fit" a machinery standard to process systems and piping networks; that OSHA should not expand the scope of the consensus standard; and that, if necessary, OSHA should develop a separate standard for process piping. (There was universal agreement on the part of these industry commenters that this standard did properly apply to the machinery elements of the process piping systems.) On the other hand, one commenter (Ex. 2–50) spoke out in favor of this OSHA standard to piping systems.

There were two commenters from the petroleum industry (Ex. 2–21 and 2–46) and one commenter from the chemical industry (Ex. 2–59) who objected to the use of a written lockout or tagout procedure as specified in the proposed Standard. These commenters stated that they use a work permit or work authorization system. The safe work permit checklist enclosed with one comment (Ex. 2–59) has provisions for the use of blinds and disconnecting pipes, and for extensive post isolating cleaning and testing. At the Houston segment of the hearing, the representative of the American Petroleum Institute acknowledged that the work authorization system was not inconsistent with the procedures set forth in the proposal. (Tr. p. H64). (OSHA agrees that a work permit checklist system or work authorization system could serve as the required written procedure as long as it meets the criteria for a procedure spelled out in this Final Rule.)

In their comments to the record, the American Petroleum Institute (API) restated their view that the lockout/tagout rule was not designed to regulate piping networks and process systems (Ex. 2–36). OSHA recognizes that the energy sources and control methods used in process hazards management are often quite different from those encountered with machinery and mechanical equipment. However, the Agency considers the basic approach of this standard to be appropriate for the control of all hazardous energy sources, including those discussed by API. Indeed, many, if not all, of the elements covered in the standard are addressed by the "work authorization procedures" commonly used throughout the petroleum and chemical industries. These procedures, which focus upon the issuance of work permits or permits for safe entry into piping systems, were acknowledged at the hearings to be consistent with the procedures set forth in the proposed rule. The primary area which warrants further explanation involves the different means used to isolate the energy in piping and process systems, and how they relate to the lockout or tagout requirements of this standard.

According to one commenter (Ex. 20), the procedural steps required for safe performance of process system maintenance are: (1) Deactivation, (2) removing contents, (3) isolation, (4) decontamination, (5) restraining, (6) verification, (7) control and (8) communication. In contrast, this standard sets forth five steps for lockout or tagout: (1) Equipment shutdown, (2) isolation, (3) lockout or tagout application, (4) stored energy restrictions, and (5) verification. However, these five steps encompass all elements of process system deenergization as well. For example, deactivation of a process system is analogous to equipment shutdown. Similarly, removing the contents of the piping system and isolation of the energy source can be compared to isolation and lockout or tagout of a machine or equipment, and decontamination and restraining in piping systems is essentially the same as restraining or minimizing the stored energy of machines and equipment. Finally, verification of the success of prior steps of a piping system isolation is the same as verification of proper implementation of the energy control program. OSHA acknowledges that when there are additional steps specific to the preparation for maintenance of piping systems, these steps would also need to be included in an employer's energy control program.

Based upon the foregoing comparison, OSHA believes that the imposition of the requirements of this standard (particularly the need for a standardized procedure) is not a "force fit" but the logical "tailoring" of the steps to a different type of equipment. Based upon the generic nature of this standard, OSHA recognizes that some modifications or "tailoring" of the requirements of this standard may be necessary, but the basic procedural provisions of the standard are designed to be used throughout general industry, in a wide range of applications.

Two commenters (Ex. 2–21 and 57) pointed out that some of the items listed in the definition of energy isolating devices (notably the blank flange and bolted slip blind) can require at least as much effort to remove as locks. These commenters pointed out that removal of these devices, when they are properly bolted in place, requires wrenches to disassemble the nuts and bolts holding the blank flange or blind. The use of these wrenches is comparable to using bolt cutters to remove a lock. Although the wrenches used for removing the nuts and bolts from the flanges may be more readily available with a piping system than a pair of bolt cutters in the average workplace, the time to remove the nuts and bolts would surpass the time to remove a lock. OSHA believes that this type of bolted system will provide comparable security against the release of hazardous energy in the system, even though a "lock" is not used. Based upon the above rationale, OSHA will consider bolted blank flanges or slip blinds to be an acceptable type of lockout/tagout device. As with all devices, these bolted systems must be used as part of a standardized, documented procedure, and they must meet the other requirements of the standard for lockout or tagout devices (that is, they must be durable, standardized, substantial and identifiable.)

If bolted flanges or slip blinds are used, a means must be devised so that each authorized employee can be identified as a participant in the project when he/she is working on it. For example, individual identification can be achieved by each authorized

employee hanging his/her tag on the blank flange or the slip blind when he/she starts work and removing his/her tag when he/she stops work. The tag in this case would supplement the locking mechanism of the bolts on the flanges or slip blinds.

The applicable consensus standard (ANSI Z244.1)(Ex. 9) has been reviewed for its applicability to process systems. It is clear from this review that this consensus standard was intended to apply to machines, equipment and processes. The definition of energy isolating device contains examples which include slip blinds, blank flanges, line valves and similar devices. These are devices used for energy isolation in piping systems.

OSHA believes that the employees working on the piping portions of processes deserve no less protection then when those same employees work on the mechanical components of the same systems. The advantage of writing this OSHA standard in performance language is to allow flexibility of compliance for all systems in which hazardous energy is or may be present. OSHA has used this approach to the formulation of this standard because of the wide range of energy control situations encountered throughout general industry.

OSHA also proposed to exclude from coverage of this standard certain installations under the exclusive control of electric utilities, as well as oil and gas well drilling operations. These industrial sectors were proposed to be exempted from this standard because lockout will be uniquely addressed for these industries in other proposed standards. In both cases, OSHA is actively working on projects to cover the special safety needs of these industries. (See 54 FR 4974, January 31, 1989 for the Proposed Standard on Electric Power Generation, Transmission, and Distribution.)

4. Should OSHA state the requirements of this final standard in performance language?

There were two commenters (Ex. 2-27, 2-29, and 2-91) who objected to the use of performance language in the proposed standard. Their objections were based upon the fact that, without specific requirements, employers would be allowed too much discretion in the means or methods that they utilize in complying with the standard.

There were 11 commenters (2-31, 2-34, 2-36, 2-37, 2-39, 2-46, 2-55, 2-57, 2-59, 2-62, 2-69, and 2-87) who favored the use of performance language in the standard. These commenters pointed out that the standard covers a vast segment of industry (both in size and type of companies) and type of operations. It is their contention that the use of performance language allows a degree of latitude to employers to "tailor" the required procedures, training requirements, and inspection parameters of the standard to fit the individual conditions present in their workplaces.

OSHA concurs with those commenters who stressed the need for flexibility in the standard. For example, the detail into which a procedure may have to go may vary depending upon the type of power the machine or equipment may utilize or the means used to isolate or block the machine or equipment from the source of power. The amount of detail in a procedure for shutting down a simple conveyor with a signal source of power, and single feed and discharge points, could be much less than the procedure for shutting down a long assembly line conveyor with multiple feed and discharge points, one which has many employees working about the conveyor. The use of multiple sources of power applied to the machine or equipment at multiple points would necessarily cause the complexity of the procedure to be enhanced.

Finally, the OSH Act, in discussing the promulgation of standards, states in the second sentence of section 6(b)(5), "Whenever practical, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired."

Based upon the foregoing, OSHA has decided to retain the performance language in this final standard.

VI. Summary of Explanation of the Final Standard

There were 108 comments and 64 exhibits placed in the record of the Proposed Standard for the Control of Hazardous Energy Sources (Lockout/Tagout) (53 FR 15496, April 28, 1988) and 16 parties participated in the public hearing. There was general agreement on the need for a comprehensive standard (Exhibits (Exs.) 2-1, 2-3, 2-4, 2-5, 2-8, 2-9, 2-12, 2-13, 2-21, 2-27, 2-29, 2-34, 2-36, 2-38, 2-39, 2-40, 2-42, 2-50, 2-52, 2-53, 2-55, 2-59, 2-64, 2-69, 2-70, 2-72, 2-73, 2-74, 2-75, 2-77, 2-78, 2-79, 2-80, 2-85, 2-87, 2-91, 2-95, 2-98, 2-100, 2-105, 2-106) with the major discussion centering around the form and the content that the Final Rules should take.

As previously discussed (see section entitled "Major Issues" above) OSHA has determined that the use of lockout for the control of hazardous energy is the more positive means of ensuring employee safety. The fuse of tagout, in lieu of lockout, requires the addition of certain elements of the program and the reinforcement of others to provide full employee protection.

This standard requires the adoption and utilization of standardized procedures and the implementation of safe work practices for the control of potentially hazardous energy during servicing and maintenance activities. It also requires the training of employees in the use of these practices and procedures. An Appendix is provided to serve as an aid in complying with the requirements of this section.

In paragraph (a), OSHA defines the scope, application and purpose of this Standard for the control of hazardous energy (lockout or tagout). The standard covers servicing and maintenance in general industry where the unexpected energization or start-up of machines or equipment or the release of stored energy could cause injury to employees. This Final Rule does not contain specifications which must be followed in all circumstances, but, rather, provides flexibility for each employer to develop a program and procedure which meets the needs of the particular workplace and the particular types of machines and equipment being maintained or serviced.

In their post-hearing comment, (Ex. 60) the AFL-CIO suggest adding the word "processes" to the words "machinery" and "equipment," to clarify that the standard is intended to cover piping systems as well as machinery and equipment. As discussed earlier, OSHA agrees that processes are covered by the standard, although the Agency felt that the use of the term "equipment" in the proposal was broad enough to cover all types of equipment, including process equipment. Further, had process and piping equipment not been within the scope of the standard, it would have been unnecessary to include a separate provision for "hot tap" operations, which are performed almost exclusively on process and piping equipment. However, in response to the comments, and as discussed elsewhere in this preamble, OSHA has revised several of the proposed provisions in the standard to refer directly to piping and process hazards and some of the unique aspects of controlling those hazards in the context of this generic rule. For example, many servicing operations involving process equipment utilize blinds and blank flanges as means of controlling hazardous energy in the process system. These blinds and flanges can be bolted in place, a method of securing which does not involve an actual lock, but which would be of comparable or greater difficulty to defeat either intentionally or inadvertently. OSHA

believes that the bolting of blinds and flanges should be considered to be a "locking device" for the purposes of the standard, and has modified its proposed definition to reflect this determination. Since the standard requires locking devices to identify the person that affixes them, the employer will need to use a supplemental tagout device on the bolted blinds and flanges to meet this requirement.

For the reasons discussed in the section entitled, "Major Issues", above, OSHA has determined that the present rulemaking effort should be limited in scope to general industry. Development of appropriate requirements for the control of hazardous energy procedures for construction, maritime, and agricultural employments will be considered for future rulemaking proceedings.

Secondly, OSHA has determined that certain installations under the exclusive control of electric utilities, as defined in paragraph (a)(1)(ii)(B), are not to be covered by this rule. These installations are intended to be covered separately by a new section, § 1910.269, "Electric Power Generation, Transmission and Distribution," which OSHA proposed on January 31, 1988 (54 FR 4974). Because of the nature of these electrical utility operations, § 1910.269 will tailor the key provisions of this standard on lockout or tagout to meet the special safety needs of that industry. However, non-utility employers and workplaces that are engaged in the activities of power generation, transmission and distribution *are* covered by this standard and are not within the intended scope of § 1910.269. Whether or not this suggested demarcation is reasonable is an issue which will be dealt with in that rulemaking proceeding.

In their post-hearing comment (Ex. 55), the Edison Electric Institute (EEI) contended that the forthcoming power generation standard should cover the servicing and maintenance of mechanical and hydraulic equipment in power plants. If such equipment is either an integral part of, or inextricably commingled with, power generation processes or equipment, OSHA agrees that the power generation standard will apply instead of the generic lockout/tagout standard.

Further, OSHA states in paragraph (a)(1)(ii)(C) that exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization installations which is covered by Subpart S of Part 1910 also are excluded from coverage by this standard. OSHA intends coverage for this work to be provided instead in a separate rulemaking on "Electrical Safety Work Practices," which was proposed on November 30, 1987 (52 FR 45530) (new §§ 1910.331 through 1910.335) as an amendment to Subpart S. Those proposed sections have their own provisions for dealing with lockout/tagout situations, and for controlling employee exposure to hazardous electrical energy with the use of electrical protective equipment. They are based largely on a national consensus standard, NFPA 70E—part II, "Electrical Safety Requirements for Employee Workplaces."

Similarly, paragraph (a)(1)(ii)(D) excludes oil and gas well drilling and servicing installations from coverage by this rule. These installations are intended to be covered separately by a new § 1910.290, Oil and Gas Well Drilling and Servicing. A proposed § 1910.290 was published on December 28, 1983 (48 FR 57202). The Agency is currently developing a revised proposal to reflect the information in the rulemaking record, which was submitted in response to the initial proposal. The hazards involving lockout or tagout that are unique to oil and gas well drilling and servicing will be given a complete evaluation during that rulemaking process and appropriate steps will be taken to control them.

One commenter (Ex. 2–54) recommended the exclusion of the machine manufacturing industry from this Final Rule. This commenter contended that the inclusion of the word "constructing" in the definition of "servicing or maintenance" would seriously endanger the ability of machine manufacturers to perform the initial construction, assembly and manufacture of machines.

During the assembly of equipment, it is normally not connected to any external power source, except when a temporary connection is made to effectuate adjustment, testing or try-out. The nature of machine manufacturing normally only requires the connection to an external power source to move parts in order to allow for the construction. Once the system has been completely assembled, it is necessary to do final testing or try-out of the system. Energization of the entire system is generally necessary to accomplish the testing. The system is then connected to external power sources and the testing undertaken. If the tests are unsuccessful or further assembly work is needed, the equipment should be disconnected from the external power source and then the additional work conducted. It is during the time when the equipment is being alternately energized and deenergized that the energy control means are particularly significant.

OSHA believes that disconnection of a machine or equipment from external power sources, as with cord and plug connected equipment, is a satisfactory method of isolating the equipment from the source of energy. OSHA also recognizes that testing with the power on is often necessary to ensure the proper assembly and functioning of all components. OSHA believes that workers "constructing" machinery and equipment need the same safeguards as other emplolyees doing other servicing on maintenance operations. OSHA is, however, providing specific requirements in paragraph (f)(1) of this Final Rule for the safeguarding of employees during operations which require the alternate energization and deenergization of machines and equipment for testing and trouble shooting.

One commenter (Ex. 2–35) recommended that maintenance of medical equipment be excluded from this standard. This recommendation was predicated on the fact that maintenance and servicing of medical equipment is already covered by national consensus standards, that technical persons working on state-of-the-art medical equipment are highly trained professionals and that some equipment must be serviced while units are energized.

OSHA believes that national consensus standards, in and of themselves, do not ensure a safe and healthful workplace since they are not enforceable regulations. Compliance with specific provisions of such standards is voluntary except when OSHA incorporates then into its regulations. In addition, as previously discussed in this preamble even if the servicing employeee is highly trained, his/her safety during the servicing operation may well be dependent on the actions of persons who are not as well trained. Other employees, upon finding a machine or equipment not operating, may attempt to start the machines, not realizing that they may be subjecting themselves or others to an increased risk of injury.

In paragraph (a)(2)(i), the Final Rule states that the standard applies to servicing or maintenance of machines or equipment. These activities are defined in paragraph (b) to include activities such as constructing, installing, setting up, adjusting, inspecting, maintaining, repairing and servicing machines and equipment. These activities generally require the stoppage of the machine or equipment and the resulting

discontinuance of the production process. It is during these activities that the machine or equipment must be isolated from the energy source and the energy isolating device disabled. It is also during these activities that employees are exposed to the unexpected energization, startup or release of stored energy against which the control procedures established in this standard are designed to provide protection.

Proper accomplishment of most servicing requires that the machine or equipment be shut down or turned off. However, simply shutting down the machine or equipment has not proven to prevent accidents when there is an unexpected energization or start up of the machine or equipment or the release of stored energy. The control of this hazardous energy is accomplished through the use of a standardized procedure which requires the shutting off of the machine or equipment, locating the energy isolating device and isolating the machine or equipment from the energy source, locking or tagging out the energy isolating device, reducing or eliminating stored or residual energy and then verifying the effectiveness of the energy isolation.

There was one commenter (Ex. 2–80) who suggested that this standard should apply before, during, and after servicing or maintenance is performed. The use of this langauge could be interpreted as meaning the standard should apply at all times since before and after do not denote a beginning or an end. OSHA believes that the steps required by this standard are considered part of the servicing activity, regardless of whether they take place before or after the specific work on the equipment has been performed. Based on this interpretation, the final standard requires the control of hazardous energy only during servicing or maintenance is being conducted.

There are some activities which are properly classified as servicing or maintenance but which are often performed during normal production operations. These activities include lubricating, cleaning, unjamming, and making minor adjustments and simple tool changes. In the proposed standard, OSHA suggested excluding these operations (paragraph (a)(2)(iii) "when it is necessary to perform the activity with the machine energized and if the activity is performed using alternative measures which the employer can demonstrate are equally effective."

Two commenters (Ex. 2–44 and 2–80) stated that this exclusion was too broad and that there is difficulty in distinguishing between normal production operations and servicing or maintenance.

As discussed earlier, OSHA recognizes that machines and equipment present many hazards during their usage during normal production operations. These production hazards are addressed by the machine guarding standards, § 1910.212 (general machine guarding standard) and § 1910.219 (guarding power transmission apparatus). This standard is not intended to deal with these same hazards. However, if a servicing type activity happens to take place during production, such as unjamming the production equipment, the employee performing the servicing may be subjected to hazards which are not encountered as part of the production operation itself. These hazards are manifested when the employee must either remove or bypass guards or other safety devices, when the employee is required to place any part of his or her body into the point of operation of the machine or equipment, or where an associated danger zone exists during a machine operating cycle. In those circumstances, when there is potential for unexpected activation or energy release and the machine or equipment can be deenergized to perform the servicing, the standard requires that it be deenergized and be locked out or tagged out in accordance with the procedure required by this standard.

As was discussed in the preamble to the proposal, OSHA recognizes that some servicing operations must be performed with the power on; in these situations, it would not make sense to require lockout or tagout, which apply to deenergized equipment. The proposal contained a requirement that when servicing or maintenance must be performed with the equipment energized, the employer must use an alternative procedure which provides, in the language of the ANSI standard, "effective protection." Paragraph 6.8 of the ANSI Z244.1–1982 (Ex. 9) states in part:

> In the case of required minor adjustments where this (deenergization) is not feasible, or in the case of normal production operations, these activities shall be accomplished under the protection of specially designed control circuits, control equipment, and operating procedures, that provide proven effective protection for the affected personnel.

The proposed provision attracted considerable comment, particularly from the union participants, many of whom felt that it provided a "loophole" in the standard. OSHA believes that much of this concern was based on a fundamental misunderstanding of what this provision was intended to accomplish. For example, Mary Twedt, of the United Food and Commercial Workers (UFCW), (Tr. p. W1–183–1900) testified about a serious injury that she had incurred while clearing a jam in a bacon slicing machine. She indicated that she had switched the machine off, but that a co-worker had inadvertently reactivated it while her hand was in the machine. However, there was no indication that it was *necessary* to perform that unjamming operation with the power on. (In fact, since Ms. Twedt did turn the machine's power off to clear the jam, OSHA assumes that it was *not* necessary to have the equipment energized at that time). Further, if it *was* necessary to keep the energy on, the proposal would have required the employer to use an alternative procedure to lockout or tagout which would provide protection.

In the testimony at the Houston hearing, the UAW contended that the "exemption" for normal production operations was too broadly drawn, and that it would be a "loophole" in the standard. Representatives of the UAW testified that they felt that the provision was unnecessary. Their reasoning essentially was that if alternative methods were used to keep the employee out of the danger zone, there was nothing for the standard to cover, since the employee would not be exposed to the hazard. (Tr. p. H290–291). OSHA agrees in principle with this statement, but believes that the standard needs to cover these situations as well in order to provide comprehensive treatment of the hazards. The Agency also agrees that the proposed provision was not clear enough in indicating the types of operations which were covered by the standard, the types of operations which would not be covered by the standard, and the criteria to be applied to each situation. Therefore, the Agency has revised this provision in the Final Rule to deal with these problems.

In the Final Rule, OSHA is clarifying the intent behind the alternative provision for servicing or maintenance which takes place during normal production operations. The general rule is that servicing or maintenance, as defined in paragraph (b), must be performed under lockout or tagout in accordance with a written procedure established under this standard. Minor tool adjustments and changes or other minor servicing activities performed during normal production operations, are not covered by lockout or tagout requirements if the activities are routine, repetitive and integral to the production operation, provided that there is an

alternative means being used for employee protection in lieu of lockout or tagout which will provide effective protection to employees.

OSHA emphasizes that this standard is not intended to cover the types of minor adjustments and other activities which are inherent in the production process. The machine guarding standards in subpart O cover these types of operations. The proposed rule included an exception for these types of operations, but OSHA has determined that there were two significant problems with the exception as proposed. First, the Agency believes that the provision was too broad as to the types of servicing or maintenance which would be excluded from the coverage of this standard. Proposed paragraph (a)(2)(iii) used the phrase "servicing or maintenance which takes place during normal production operations, such as lubricating, cleaning, and making minor adjustments and simple tool changes" to describe activities which would not be covered by this standard. OSHA's intention was to exclude from coverage those actions which would otherwise fit within the definition of "servicing or maintenance," but which are actually routine, repetitive actions which are integral to the operation of the equipment for production, and which are necessary to allow production to proceed without interruption. However, the language of the proposal could have been read more broadly, to exclude from coverage certain servicing operations which should not be considered to be part of "normal" production, and which should be performed with the equipment deenergized. OSHA has revised the proposed exclusion to clarify the limitations of the standard, and to provide more guidance as to the types of servicing activities which must be performed under lockout or tagout. The second problem with the proposed exclusion was that it would have required the employer to demonstrate that it was necessary to perform the operation with the machine or equipment energized. The record reflects much concern about this provision, particularly with regard to the criteria to be applied in determining the necessity of having the equipment energized. OSHA emphasizes that this exclusion was intended to cover the types of routine, repetitive, minor adjustments which are integral to and necessary for the production process. The revised language in the Final Rule sets forth the criteria to be applied in determining whether a given servicing operation is covered by this standard, or whether it is to be considered a part of normal production operations, which require alternative means of protection.

Normal production operations, together with those minor servicing aspects which are also excluded from lockout or tagout coverage, continue to be covered by the machine guarding requirements of subpart O of part 1910. OSHA has provided several examples of the types of activities taking place during production which the Agency would consider to require lockout or tagout, as well as examples of those which would not. It must be emphasized that exclusion from lockout or tagout does not mean that the employer can avoid providing protection. As the exclusion itself makes clear, the employer must provide alternative measures which he/she can demonstrate will provide effective protection. This will generally involve compliance with OSHA's machine guarding requirements throughout the production process.

In evaluating servicing performed during normal production operations, the first question to be asked is whether employees must bypass guards or otherwise expose themselves to the potential unexpected release of hazardous energy. If no such exposure will occur, either because of the method in which the work is performed or because special tools, techniques, or other additional protection is provided, lockout or tagout is not required. If there is such exposure, the lockout or tagout requirements of this standard apply. However, if the servicing operation is routine, repetitive and must be performed as part of the production process, it is obvious that lockout or tagout cannot be performed, because these procedures would prevent the machine from economically being used in production. OSHA will continue to treat these operations as being covered by the general machine guarding requirements of subpart D. The employer must provide appropriate guarding to protect employees from points of operation, nip points, and other areas of the equipment where the employees might be endangered. The use of alternative protective methods to keep employees' bodies out of danger zones, such as specially designed servicing tools, remote oilers, and the like, would meet this requirement.

The Final Rule, as did the proposal, also recognizes that there are some servicing operations in industry which require the equipment to be energized at least at some point during the servicing, for the purpose of testing or positioning the machinery or equipment or the components thereof. Where the energization is limited to those times, and is not shown to be necessary for the entire servicing operation, such servicing will generally be covered by the lockout or tagout requirements of this standard, but with the implementation of the special procedures set forth in paragraph (f)(1) for the temporary removal of lockout or tagout only when the machine or equipment must be energized.

The concept behind both the proposed and final provisions on normal production operations was taken from the ANSI standard, which attempted to address situations in which it was necessary to keep equipment energized during servicing. It was clear to the ANSI committee, as it was and is to OSHA, that neither lockout nor tagout is possible in a situation when the equipment cannot be deenergized, because these efforts involve assurances that deenergization has been achieved and that the proper procedures and verifications of deenergization have been carried out. However, both ANSI and OSHA believe that even if lockout or tagout cannot be done, the employer must provide alternative procedures to lockout/tagout which will protect the employees doing the servicing under those conditions.

There are some situations in which lockout or tagout may not be effective or appropriate, and the standard does not require the use of lockout or tagout in these circumstances. In paragraph (a)(2)(iii), OSHA lists those situations where lockout or tagout provisions do not apply.

In the proposed paragraph (a)(2)(ii)(A), OSHA specified that the standard would not apply when employees are working on cord and plug type electrical equipment for which exposure to the hazards of unexpected energization, start-up, or release of stored energy of the equipment is effectively controlled by other measures. This exclusion would encompass the many varieties of portable hand tools that are found in the workplace, as well as cord and plug equipment which is intended for use at a fixed location.

There were 13 commenters (Ex. 2–14, 2–20, 2–27, 2–34, 2–38, 2–40, 2–44, 2–63, 2–76, 2–29, 2–80, 2–97 and 2–105) on the issue of the proposed exemption for cord and plug connected equipment. Four of these commenters (Ex. 2–44, 2–63, 2–79 and 2–97) stated that the requirements of this standard should apply to all situations (i.e., OSHA should not allow an exemption for cord and plug connected equipment). Two commenters (Ex 2–27 and 2–76) suggested that the standard should apply when the plug is

not near the employee or if it could be plugged in without the employee's knowledge. Two commenters (Ex. 2–38 and 2–40) recommended expanding the scope of this exception to all small machinery or to those pieces of equipment for which the energy isolating device is in the control of the employee performing the maintenance. One commenter (Ex. 2–39) concurred with the proposal as written while one commenter (Ex. 2–14) suggested spelling out the alternate measures which were necessary to eliminate the requirement for locking out the energy isolating device. One commenter (Ex. 2–20) concurred with the exception as long as the employee who is doing the maintenance removes the plug and that employee does so only to do the maintenance.

Based upon the arguments put forward by each of the above commenters, OSHA has decided that the lockout/tagout requirements of the standard will not apply to cord and plug connected equipment if the equipment is unplugged and the plug is in the exclusive control of the employee who is performing the servicing or maintenance of that equipment. Because this employee would control the plug, he/she would be able to prevent the equipment from becoming reenergized during the servicing operation.

Paragraph (a)(2)(ii)(B) proposed that the use of lockout/tagout procedures would not apply to "hot tap" operations when continuity of service or process operation is essential, and complete shutdown of the system impractical, provided that documented procedures and special equipment are used by the employer which will provide proven effective protection for employees. This provision was intended by OSHA to address the petroleum industry's concern (Ex. 16) for the handling of "hot tap" operations commonly used in their facilities, although it might also address other similar operations.

The "hot tap" procedure is employed in repair, maintenance, and service activities, and involves the cutting and welding of equipment (pipelines, vessels or tanks) under pressure in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam and petrochemical distribution systems. Special metal cutting and welding equipment and specific operating procedures are used to limit explosion hazards. The operation may be performed by in-house maintenance personnel or by outside contractors.

The use of "hot tap" procedures appears to avoid several safety risks which would otherwise arise in servicing equipment which is under pressure. First, process shutdowns and start-ups with equipment of this nature pose extreme hazards of explosions and fires due to the complexities and interrelationships among process components. For example, during start-up it is necessary to purge pipelines of air, water and/or inert gases before hydrocarbons are introduced. Malfunctions or operator errors during purging could easily create explosive mixtures in the equipment. In other instances, process shutdowns and start-ups can result in rapid condensation within the process equipment and may cause "water hammers," which are sudden pressure changes that can shake, vibrate and stress equipment to the extent that the pipeline breaks or connection leaks develop. Finally, a third class of hazard avoided is one created by the much higher level of worker activity required during a complete process shutdown or start-up. This may result in more extensive worker exposure to the hazards of the shutdown or start-up procedure, and in greater potential for injury than would be involved in performance of "hot tap"-type activities, in which fewer employees would be exposed.

The OSHA standard, as proposed, stipulated that hot tap operations would be exempt from the requirements of the standard if the employer could demonstrate that: (1) Continuity of service is essential; (2) shutdown of the system is impractical; and (3) documented procedures and special equipment are utilized which will provide effective protection for employees. In the preamble and the Appendix to the proposed rule, OSHA referred to the American Petroleum Institute's (API) publication, "Procedures for Welding or Hot Tapping on Equipment Containing Flammable," Publication 2201, Second Edition, November 1978, (Ex. 3–16). Reference to this document was intended to serve as an illustration of an acceptable procedure. It should be noted that the API procedure applies only to piping, vessels and tanks containing flammable liquids, gas or combustible material.

OSHA's intent in proposing this exception from the requirements of this standard was to allow, in certain cases, a particular type of work (the hot tap) in a limited number of cases (that is, when continuity of service is essential and shutdown is impractical) while providing for an acceptable level of safety for employees. Without this exception to the requirements of this standard, a hot tap operation could not be conducted since the standard would otherwise require machine or equipment shut down and lockout or tagout of energy isolating devices to perform servicing or maintenance.

There were eight commenters (Ex. 2–20, 2–21, 2–22, 2–27, 2–70, 2–76, 2–80 and 2–81) to this proposed requirement. One commenter (Ex. 2–20) suggested that the first two criteria listed above (that continuity of service is essential and shut down is impractical) are unnecessary and should be eliminated from the final rule. Three commenters (Ex. 2–21, 2–22 and 2–81) recommended eliminating the exception entirely. One commenter (Ex. 2–70) proposed the elimination of the need to use special tools. There were two commenters (Ex. 2–27 and 2–80) who encouraged OSHA to be more specific and to detail exact training requirements and work practices for workers involved in hot tap operations. Finally, one commenter (Ex. 2–76) expressed agreement with this concept as proposed.

OSHA believes that employees performing hot tap operations should have comparable protection to workers performing other servicing or maintenance of machines or equipment. OSHA also believes that these operations should be allowed to be conducted when certain limited conditions exist, such as when continuity of service is essential and system shut down is impractical. By specifying these limitations the employer would be prohibited from conducting these operations simply as an expedient. The need for continuity of service would be illustrated by the pipeline containing a petroleum product where stopping the flow of the product and draining the pipeline could introduce an additional danger to employees since the concentration of the gaseous product remaining in the pipe, when mixed with air, could fall within the explosive range of the product, thereby threatening an employee with serious injury if that employee would attempt to weld on the pipe. In this case, shut down may not be practical because shutting down the system may prove more hazardous than allowing the continued operation of the system while the hot tap operation is being conducted. Another example would be when a large storage tank with a hazardous substance is punctured or otherwise penetrated. There is obviously little or no time available to continue the service (store the substance) and shut down the system (drain the tank). In this case, the hot tap operation could be safely and

properly conducted if a documented procedure and the required equipment are used so that they provide effective protection for employees.

In paragraph (a)(3), OSHA sets forth the manner in which the employer is required to protect employees from injuries that could result from the unexpected energization or start up of machines or equipment, or the release of stored energy, when they are engaged in servicing or maintenance activities. This standard requires the development of a program centered around the utilization of a standardized procedure and the training of employees in their role in the successful use of that procedure.

Paragraph (a)(3)(i) specifies that the control of hazardous energy be accomplished by the use of a standardized procedure for affixing the appropriate lockout or tagout devices to energy isolating devices and by otherwise disabling equipment. The steps to be followed by the employer to accomplish this goal are set forth in paragraphs (d)(1) through (d)(5).

In paragraph (a)(3)(ii), OSHA states that the intention of the standard is not to replace existing specific OSHA lockout and/or tagout provisions, but to supplement and support these provisions with the requirement for establishing a procedure and with the requirement for training employees in the energy control program. The following listing indicates a number of OSHA standards which currently impose lockout-related requirements:

Powered Industrial Trucks

1910.178(q)(5)(i)

Overhead and Gantry Cranes

1910.179(g)(5)(ii)
1910.179(g)(5)(iii)
1910.179(g)(5)(i)
1910.179(l)(2)(i) (b), (c), (d)

Derricks

1910.181(f)(2)(i)(c)
1910.181(f)(2)(i)(d)

Woodworking Machinery

1910.213(a)(10)
1910.213(b)(5)

Mechanical Power Presses

1910.217(b)(8)(i)
1910.217(d)(9)(iv)

Forging Machines

1910.218(a)(3)(iii)
1910.218(d)(2)
1910.218(e)(1)(iii)
1910.218(f)(2) (i), (ii)
1910.218(a)(3)(iv)
1910.218(e)(1)(ii)
1910.218(f)(1) (i), (ii), (iii)
1910.218(g)(2)

Forging Machines (continued)

1910.218(h)(2)
1910.261(i)(1)
1910.218(j)(1)
1910.218(h)(5)
1910.218(i)(2)

The standards listed above provide limited coverage of machinery, equipment and industries and do not address lockout or tagout issues or methodology in any detail. For example, none of the existing standards cover the need for a procedure or for more than one or two procedural steps pertaining to the actual application or release of energy control measures. The current provisions also do not address the basic requirements contained in the standard which are needed to support and coordinate the implementation of control measures such as the selection of hardware, communications, periodic inspections, and assignment of duties. Additionally, the need to document a procedure, or to train employees engaged in the relevant activities, is not explicitly required by any of the present regulations. A typical example of this limited coverage is found in the following provisions for mechanical power presses:

Section 1910.217(b)(8)(i). A main power disconnect switch capable of being locked only in the off position shall be provided with every press control.

Section 1910.217(d)(9)(iv). The employer shall provide and enforce the use of safety blocks for use whenever dies are being adjusted or repaired in the press.

A general review of these and other lockout and lockout related provisions in OSHA's § 6(a) standards would seem to indicate that the consensus groups which originally developed these standards had either of two primary concerns in mind. Those concerns involve the need either (1) to provide equipment with the physical means or capability to isolate energy sources during maintenance and repair activities; or (2) to make a choice of the control measures (locks or tags) which were to be provided and used on the specific machine, equipment or process covered by the standard.

The first category of provisions, while requiring the equipment to have the capability of being locked out, does not necessarily require that such control be accomplished. For example, § 1910.213(b)(5) states, "On each machine operated by electrical motors, positive means shall be provided for rendering such controls or devices inoperative while repairs or adjustments are being made to the machines they control." As another example, § 1910.218(e)(1)(ii) states, "Air hammers shall have a shutoff valve as required by paragraph (d)(2) of this section and shall be conveniently located and distinctly marked for ease of identification." These provisions are specific in nature as they apply to the machines and equipment regulated and are primarily design oriented. For the most part, they address the importance assigned to the proper installation of equipment with regard to the arrangement of electrical and mechanical components. They do not, however, address the use of these components directly, nor do they establish a procedure for assuring that they are, in fact, used. This standard supplements these provisions and does not conflict with their requirements. The equipment required by this category of current rules will be used as part of the servicing procedures set out in the Final Rule. For these reasons, OSHA did not propose any change in provisions in this category as they currently appear in part 1910. Provisions of similar content are:

1910.179(g)(5) (i), (ii), (iii)
1910.217(b)(8)(i)
1910.218(e)(1)(iii)
1910.218(j)(i)
1910.261(k)(2)(ii)
1910.263(l)(8)(iii)
1910.213(a)(10)
1910.218(a)(3)(iii)
1910.218(h)(2)
1910.252(c)(1)(i)
1910.262(c)(1)
1910.265(c)(26)(v)

The second category of provisions involves those which mandate the specific use of lockout, tagout or other energy control devices for certain machines, equipment or industries. The category addresses the application of locks, locks or tags, locks and tags, and in some cases the use of blocks, to control potentially hazardous energy.

An example of provisions used to specify the use of locks for a control measure is found in § 1910.179(1)(2)(i)(c) which states, "The main or emergency switch shall be open and locked in the open position." Provisions of similar content are sections:

1910.181(f)(2)(i)(c)
1910.218(f)(1)(i)
1910.218(h)(5)
1910.218(i)(2)
1910.262(n)(2)
1910.262(q)(2)
1910.263(l)(3)(iii)(b)
1910.218(d)(2)
1910.218(f)(2)(i)
1910.218(i)(1)
1910.261(b)(4)
1910.262(p)(1)

Section 1910.261(j)(4)(iii) which states: "When cleaning, inspecting, or other work requires that persons enter the beaters, all control devices shall be locked or tagged out, in accordance with paragraph (b)(4) of this section." Provisions of similar content are sections:
1910.261(g)(2)
1910.261(j)(5)(iii)
1910.261(g)(19)(iii)

An example of provisions used to specify the use of locks combined with tags is found in § 1910.261(g)(15)(i) which states: "Valves controlling lines leading into a digester shall be locked out and tagged. The keys to the locks shall be in the possession of a person or persons doing the inspecting or making repairs." A provision of similar content is found in § 1910.261(f)(6)(i).

An example of provisions used to specify the use of blocks to control hazardous energy is found in § 1910.217(d)(9)(iv) which states: "The employer shall provide and enforce the use of safety blocks for use whenever dies are being adjusted or repaired in the press." Provisions of similar content are sections:
1910.218(f)(2)(ii)
1910.218(a)(3)(iv)
1910.265(c)(13)
1910.218(f)(1)(iii)
1910.261(b)(4)

The groups of provisions found in this second category, and others similar to them covering potentially hazardous energy, are also not replaced by the final lockout or tagout standard. These provisions selectively require the use of the most effective devices for isolating and securing energy sources. This standard will supplement these other provisions in much the same way as with the first category in that it requires the establishment of procedures for energy controls, and the training of employees in these procedures.

In summary, this standard focuses primarily on procedures—procedures that are necessary to provide effective control when dealing with potentially hazardous energy sources. Where current standards require the use of specific measures, those standards are supplemented and not replaced by the procedures and training requirements of this Final Rule.

This standard is also intended to interact with any new or revised standards which may be promulgated in the future to address the use of specific control measures on an individual basis. Selection of the specific method of control, at that time, will reflect a thorough evaluation of the extent of exposure to the hazard; the risk of injury involving that particular machine, equipment, or industry, and the feasibility of applying a particular method of control. This standard requires that procedures be followed to implement the required control as part of a total package including training and education.

In paragraph (b), OSHA is adopting a number of definitions to clarify the meaning, intent and purpose of certain terms contained in this standard. In the proposed standard, all but five of the definitions were consistent with those published by the American National Standards Institute (ANSI) in their consensus standard, ANSI Z244.1–1982. The five definitions that were added covered the terms "energized," "setting up," "normal production operations," "hot tap," and "servicing or maintenance." In the Final Rule, OSHA has changed six of the proposed definitions, has added two definitions and deleted one.

The definitions of affected and authorized employees, as proposed, received considerable comment. As proposed, the definition of each was:

Affected employee. A person, other than the authorized employee, whose job includes activities covered by this standard as set forth in paragraph (a)(2) of this section.

Authorized employee. A qualified person to whom the authority and responsibility to perform a specific lockout and/or tagout assignment has been given by the employer.

Eight of the eleven commenters who discussed these definitions recommended either combining the two (Ex. 2–5, 2–28, 2–32 and 2–85) or revising them for clarity (Ex. 2–34, 2–74, 2–76 and 2–89). One commenter (Ex. 2–20) suggested changing the definitions to include supervisors while one commenter (Ex. 2–50) suggested changing "qualified" to "competent" based upon the dictionary definition of each of these terms. One commenter (Ex. 2–75) said that the definitions were satisfactory as stated.

Based upon the confusion which each of these definitions have created, OSHA is revising both definitions to identify each type or class of person. This differentiation is based upon their role in the control of energy (the action which they must either take or not take during the servicing or maintenance of machines or equipment) and the knowledge or information which they must possess regarding locking out or tagging out energy isolating devices.

OSHA has determined that the definitions of "authorized employee" and "affected employee" need to be clarified to reflect more accurately the person's involvement in the use of lockout or tagout. If an employee must utilize the energy control procedure, that employee is considered to be an "authorized employee." By contrast, an "affected employee" is one who does not perform the servicing or implement the energy control procedure, but whose responsibilities are performed in an area in which the energy control procedure is implemented and servicing operations are performed under that procedure. The affected employee does not need to know how to perform lockout or tagout, nor does that employee need to be trained in the detailed implementation of the energy control procedure. Rather, the affected employee need only be able to recognize when the energy control procedure is being implemented, to identify the locks or tags being used, and to understand the purpose of the procedure and the importance of not attempting to start up or use the equipment which has been locked out or tagged out. The definition of "affected employee" also recognizes that an affected person and an authorized person may be one and the same person when a machine operator or user must also perform servicing or maintenance on the machine or equipment. In this case, the employee must have the requisite knowledge of an authorized employee.

The proposed definition of "authorized employee" appeared to limit that term to a particular person who has responsibility for the overall implementation of an energy control procedure. Many comments indicated that this took protection away from individual employees who had responsibilities under the procedure but were not actually in charge of its full implementation (Ex. 2–32, 2–34, 2–40, 74, and 2–85). OSHA agrees that as long as an employee is involved in performing an element of servicing and maintenance which is covered by the energy control procedure, that employee should be considered an "authorized employee" for the purpose of this standard. This is particularly important in the context of the requirement in paragraph (d)(3) of the standard, which requires the authorized person to affix a personal lockout or tagout device on the energy isolating device as part of the energy control procedure. The revised definition assures that when a servicing task is performed by a team or group of employees, each employee who is directly exposed to the hazards of the servicing operation will have the responsibility to affix his/her personal lockout or tagout device before beginning the work and to remove it

when he/she completes the work. In addition, as discussed below, paragraph (c)(5)(ii)(D) of the Final Rule provides additional accountability by requiring such lockout and tagout devices to identify the authorized person responsible for applying them.

In the proposed standard, OSHA defined the term "energized" to refer to the connection of equipment to an energy source (mechanical, electrical, hydraulic, etc.) which has not been isolated. There was one commenter (Ex. 2–76) who recommended including language for stored energy.

Based upon an evaluation of the way which this term is used in the standard, OSHA has changed the definition to indicate that energized means connected to an energy source or containing residual or stored energy. OSHA has dropped the phrase "which has not been isolated" because connection to an energy source means that the machine or equipment has not been isolated.

In this final standard, OSHA has amended the proposed definition of "energy source" to eliminate the phrase, "that is capable of causing injury to employees." The definition becomes, in essence, that an energy source is a source of energy. If an energy source does not have the capability of causing injury to employees, it is not "hazardous energy" within the scope of this standard. As used in the standard, an energy source includes the means of transmission of the energy from its true source to the energy isolating device. Therefore, isolating a machine or equipment from an energy source means utilizing an energy isolating device to interrupt the flow of energy from the means of transmission of the energy to the machine or equipment.

The identification of "energy sources," as defined in this proposal, is complicated by three very important considerations: (1) Energy is always present in machinery, equipment or processes; (2) energy is not necessarily dangerous; and (3) danger is only present when energy may be released in quantities or at rates that would harm an employee. Generally speaking, however, potentially hazardous energy sources are defined as those that can cause injury to employees working in, on, or around machines or equipment.

The energy sources identified in this standard require a more detailed discussion. "Energy," as used in this document means mechanical motion; potential energy due to pressure, gravity, or springs; electrical energy; or thermal energy resulting from high or low temperature. Some energy sources can be turned on and off, some can be dissipated, some can be eliminated, and some can only be controlled. These concepts will be addressed throughout the discussion of energy control procedures in this Final Rule. The following brief analysis of energy sources may provide the reader with a better understanding of the provisions of this standard.

1. Mechanical motion can be linear translation or rotation, or it can produce work which, in turn, produces changes in temperature. This type of energy can be turned off or left on.

2. Potential energy can be due to pressure (above or below atmospheric) as in hydraulic, pneumatic, or vacuum systems, or it can be due to springs or gravity. Potential energy manifested as pressures or in springs can be dissipated or controlled; it cannot be turned off or on.

3. Electrical energy refers to generated electrical power or static electricity. In the case of generated electricity, the electrical power can be turned on or turned off. Static electricity cannot be turned off; it can only be dissipated or controlled.

4. Thermal energy is manifested by high or low temperature. This type of energy is the result of mechanical work, radiation, chemical reaction, or electrical resistance. It cannot be turned off or eliminated; however, it can be dissipated or controlled.

The definition for "normal production operations" noted that these were operations which enable the machine or equipment to perform its intended production functions. These functions would be carried out by employees with the machine or equipment energized.

There were two comments (Ex. 2–29 and 2–80) who discussed this definition. One commenter (Ex. 2–29) contended the minor repairs, adjustments and operations should be considered servicing and maintenance rather than normal production operations. The other commenter (Ex. 2–80) suggested that the language of the Final Rule more clearly differentiate between normal production operations and servicing and maintenance.

As evidenced throughout this rulemaking proceeding, the line between "normal production operations" and "servicing or maintenance which takes place *during* normal production operations" is not always evident. The coverage of these activities, in simplest terms, is as follows: Normal production operations are covered by the machine guarding requirements in subpart O of part 1910. If servicing or maintenance is performed during normal production operations without the removal or bypassing of the machine guarding required by subpart O, this standard does not apply. Servicing or maintenance which occurs during normal production operations is covered by this Final Rule only if employees must bypass guards or otherwise place part of their bodies into an area in which they are exposed to the unexpected energization or activation of the equipment. If the employee is not exposed in this manner, such servicing or maintenance during normal production is not covered by this Final Rule. OSHA believes that the following examples will illustrate the types of activities which will come within each set of requirements.

In a printing shop, when a printing press is being used to produce printed materials, there is often the need to make minor adjustments such as to correct for paper misalignment while the press is running. This is a part of the production process, and is subject to the machine guarding requirements. The use of remote control devices will keep the employees from reaching beyond the machine guards. In addition, the use of inch (or jog) devices will permit machine speed control for test purposes. By contrast, however, printing presses may jam, requiring the employee to bypass the machine guards in order to reach the area of the jam and clear it. Although the need to unjam the machine comes about during normal production operations, it is a servicing activity which involves employee exposure to unexpected activation of the machine or release of energy, and as such, is covered by this Final Rule.

In a machine shop, a milling machine machine operator must adjust the flow of coolant oil to parts being milled while the cutting tool is in operation. This operation, which is part of the normal production process for the machine, is covered by the machine guarding requirements. Guarding must be provided to keep the employee's body away from nip points and other points of operation. If it becomes necessary to adjust the movement of the long-bed milling machine worktable where the isolating hydraulic cut-off valve is not in exclusive control of the person making the adjustment, and this requires the employee to place any part of his/her body in an area which was otherwise required to be guarded, this Final Rule would apply. If this step is performed without the employee having to bypass the guarding or otherwise expose his/her body to the potential release of energy or the unexpected activation of the milling machine, this Final Rule would not apply.

An employee is operating a machine which applies and seals a clear plastic

sheet around a packaged product. There is a blade on the machine which cuts the plastic sheets, and this blade must be cleaned off periodically during the production process. Since the process must be stopped to clean off the blade, one could argue that this operation is more in the nature of servicing or maintenance than normal production; on the other hand, since it must be performed frequently during production, one might also argue that it was actually part of the production process. Because of the dovetailing of the requirements of this standard and the machine guarding requirements of subpart O, protection must be provided, regardless of whether the above operation is considered to be production or servicing. If it is production, the employee must be provided with guarding to protect him/her from the dangers of contacting the blade with part of his/her body; the cleaning would need to be done with special tools and procedures to provide the necessary protection. However, if it is servicing, and the employee is exposed to the point of operation which is otherwise required to be guarded, the lockout or tagout provisions of this standard would apply.

The definition of normal production operations has been simplified to state the normal production operations are the utilization of a machine or equipment to perform its intended production function. Anything that is done to prepare a machine or equipment to operate, such as setting up or changing the blade on a power saw, would not be included in the utilization of the machine or equipment and would be classified as servicing or maintenance rather than normal production operations. OSHA believes that this definition complements the definition of "servicing or maintenance" in this Final Rule. Further, these two definitions together help to provide a dividing line between the requirements of this standard and the safeguards already required for normal production operations by the general machine guarding standards in subpart O of part 1910 (§ 1910.212 and § 1910.219). Whereas the definition of servicing or maintenance includes those activities which require an employee to remove or bypass guards or other safety devices or to otherwise expose himself/herself to hazardous machine elements, the standards for machine guarding offer protection when the machine is being used in the manner in which it was designed and intended to be used, that is, when the machine or equipment is used to perform its intended production function.

OSHA has also amended the definition of setup to limit that activity to preparing a machine or equipment to perform its intended function. As proposed, setup involved placing a machine or equipment into an operational mode which could have included activities such as turning it on. Many types of machines and equipment can be turned on or started without doing what is commonly thought of and referred to as setup work.

The definition of lockout/tagout as proposed has been changed in the Final Rule to two separate definitions. This was done to clarify the fact that a lockout device, when properly applied, prevents operation of the energy isolating device whereas a tagout device indicates that the energy isolating device and the machine or equipment should not be operated.

OSHA has eliminated the definition of qualified person from this Final Rule. This was done because OSHA believes that this standard adequately specifies the type of training which is necessary and appropriate to prepare any person to perform the tasks involved in the employer's energy control program. The Final Rule requires that both authorized employees and affected employees be trained in and understand those things which are necessary for the employee to know in order to do the lockout or tagout safely. Paragraph (c)(7)(i)(A) requires that authorized employees receive training in the recognition of the applicable hazardous energy sources, the type and magnitude of the energy available in the workplace and in the procedure to be used for energy isolation and control. Additionally, paragraph (c)(7)(v) requires that, before the machine or equipment is turned off, the authorized employee knows the type and magnitude of the energy to be controlled, the hazards involved with such energy, and the procedure to be used for controlling the energy.

The development and documentation of energy control procedures is of little use unless the employer requires all authorized employees to utilize the procedures that have been provided whenever they are servicing or maintaining machines or equipment. In general, whenever lockout or tagout is used in accordance with this standard, each employee performing servicing or maintenance shall affix and remove, as necessary, an individual and identifiable lock or tag on the energy isolating device as part of the energy control procedure. To meet these requirements, paragraph (c)(1) requires the employer to ensure that hazardous energy control procedures have been implemented for all activities covered by this standard, and are being complied with by the employees. Methods for evaluating and maintaining the proper implementation of these procedures are provided in two other paragraphs of the standard: paragraph (c)(6), which addresses periodic inspection for observing employee compliance with the procedures; and paragraph (c)(7), which covers initial and periodic follow-up training to develop and maintain the knowledge and skills needed by employees for the safe application and removal of energy controls.

Paragraphs (c)(2) of this standard contains a discussion of the conditions under which either lockout or tagout may be utilized. OSHA makes a distinction between the method of controlling the energy (the type of energy control devices utilized) based primarily upon whether or not the energy isolating device was designed to accommodate a lockout device.

As discussed in the major issues section of this preamble, OSHA recognizes that there are many important elements of any energy control program, and that the choice of lockout versus tagout is just one of these elements. Further, OSHA also acknowledges that in isolation, the attachment of a lockout device to an energy isolating device, will provide greater protection against reactivation that an attachment of a tagout device. However, the issue to be resolved in this rulemaking is not the simple question of whether a lock is more protective than a tag. Rather, the Agency must address a series of related questions involving not only the effectiveness of lockout or tagout, but the feasibility and cost implications of requiring one method or the other in all energy control programs.

The record is replete with comments and testimony on the superiority of lockout to tagout as a means of securing energy isolating devices. However, there are also considerable data in the record on programs which use only tags and appear to be effective in doing so. In addition, whereas there is much information on equipment currently in place which has been designed to accept lockout devices, there is a dearth of data indicating the extent to which equipment across general industry would need to be retrofitted or modified to give it the capability to be locked out. There is little question that there is a significant hazard which needs to be addressed by an OSHA standard, but OSHA must regulate in the face of much conflicting evidence on the issues of feasibility and effectiveness. Under these circumstances, the Agency has

reached several conclusions. First, as a general rule, lockout must be implemented as part of the overall energy control program for equipment which is "capable of being locked out." The term "capable of being locked out" is defined in the standard. Equipment which is designed with a hasp or other attachment which can be locked, or which incorporates a locking mechanism, is obviously considered to be "capable of being locked out." However, other equipment without such a *designed-in* locking capability may still be considered "capable of being locked out," but only if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device, or permanently alter its energy control capability. Second, for equipment which is capable of being locked out, OSHA recognizes that employers may, nonetheless, wish to implement a tagout program instead of lockout. OSHA will allow the use of tagout programs under these conditions only if the employer can demonstrate that the complete program will, when using tagout devices attached to the energy isolating devices, provide full employee protection. In most cases, in order for OSHA to consider a tagout program to be sufficiently protective, the elements of such a program will need to be very detailed and intensive, and will necessitate far more commitment and day-to-day vigilance to make it work than will a lockout program. This is necessary because a tag serves only as a warning and not as a positive restraint on hazardous energy. The Final Rule establishes criteria which OSHA will evaluate in determining whether a given tagout program does, in fact, provide full employee protection. Thus, when equipment is capable of being locked out, OSHA anticipates that it will be easier for employers to use that capability than to bypass it in favor of a tagout program. Third, for equipment which is not "capable of being locked out," OSHA has determined that the employer's energy control program shall use either lockout or tagout. In making this determination, the Agency recognizes the efforts of many employers, as reflected in various comments and testimony, to retrofit their equipment to accept lockout devices. However, for equipment which would require significant modification to make it capable of being locked, such actions are necessarily taken on a case-by-case basis. Despite the Agency's efforts to acquire data in this area throughout the course of the rulemaking, there is still inadequate information in the record to allow OSHA to make a determination on the overall costs or feasibility of modifying such equipment to accept lockout devices. Accordingly, for such equipment, the standard allows the use of lockout or tagout as part of the energy control program. Fourth, and perhaps most critical, OSHA reemphasizes that the selection of lockout or tagout is only one element of the overall energy control program. Locks and tags do not deenergize equipment; they are attached after the equipment is deenergized. The actual deenergization must be accomplished using a carefully—developed and implemented set of procedures, combined with adequate training of both affected and authorized employees. Therefore, in determining the protectiveness of the standard, it is necessary to look at the *entire* standard, and not just at portions of it in isolation. OSHA is confident that the interrelationship between the different requirements of the standard will result in effective protection to employees during the performance of equipment servicing and maintenance operations.

Although OSHA has determined that lockout is, in general, a safer means of assuring deenergization of equipment than tagout, the Agency has also determined that the record provides inadequate evidence on which to support the extension of lockout to all machinery and equipment throughout general industry. Two points must be emphasized in this regard: First, the standard is a "generic" one, and as such, will apply to virtually all types of machines and equipment in use in American industry today. The designs range from the simplest to the most complex, from the oldest to the newest, and from the most worker-intensive to the most automated. Despite this determined effort to obtain the necessary information in the course of this rulemaking, OSHA has been unable to develop the type and quality of evidence on the available technology and the impacts on the affected industries which would support a finding that lockout is feasible throughout general industry. It is not possible, based on the current record, to develop a reasonable estimate of the amount of equipment modification that would be necessary throughout industry to provide such equipment with the capability of accepting lockout devices. Secondly, OSHA is concerned about whether such existing equipment could be modified for lockout without the possibility of creating greater hazards to employees as a result of the modifications. This latter concern was shared by the State of Virginia's special Task Force on lockout/tagout in General Industry, which is made up of representatives from major employer and employee associations and major industries in that State. The Task Force recommendations to OSHA, which were submitted to the record by the Virginia AFL–CIO, provided that where some kind of modification would have to be made to equipment in order to accommodate a lock, the standard should only require a tagout procedure. (Ex. 13A).

OSHA acknowledges that there are significant problems involving the use of tagout devices, as discussed above. However, the Agency also recognizes that where equipment is not designed to accept a lockout device, tagout will need to be used, even though it does not provide the same assurance that the equipment will not become energized during servicing or maintenance. What becomes important in such situations, therefore, is for the standard to address as many of the weaknesses of tagout as possible, and to impose more stringent requirements which improve the capability of a tagout program to provide effective employee protection. In developing the Final Rule, OSHA has considered the major shortcomings of the use of tagout, as discussed in the comments and testimony, and has revised the proposed requirements to focus on appropriate means by which these shortcomings can be avoided or minimized. In particular, the Final Rule requires tagout devices to be considerably stronger and more durable than provided for in the proposal. The revised provisions on tagout are intended to deal with the problem of tagout devices deteriorating when they become wet or when they are exposed to a corrosive atmosphere. The final standard also requires the tagout device to have a much stronger means of attachment which cannot simply be twisted off or unwound from the energy isolating device. The record clearly indicates that the tag must remain securely affixed throughout the servicing operation in order to serve as an effective warning device. The use of flimsy attachments makes it too easy for an unauthorized employee to remove the device, either intentionally or inadvertently. As noted earlier, there is also testimony presented at the hearings about situations in which tags have become dislodged from their attachment point by environmental conditions such as wind and rain. Perhaps the greatest limitation of tagout is that it does not actually secure the energy isolating device and prevent the equipment from being reenergized. In lockout, the

presence of a servicing employee's locking device on a piece of equipment will prevent another employee from activating that equipment, even if that other employee does not understand the energy control procedure. By contrast, tagout is highly dependent on human factors, and requires constant vigilance to ensure that tagout devices are not bypassed. In addressing this limitation, OSHA is requiring additional training for employees who work with tagout or who work in areas in which tagout is used. Such training must be provided on at least an annual basis. Further, the training program must incorporate information which emphasizes the problems involved with the use of tagout, to make employees aware of why they must not deviate from the requirements of the tagout program. In addition, the standard requires that the employer's energy control procedure incorporate provisions for monitoring and enforcing the proper use of tagout. OSHA has determined that these strengthened requirements will greatly enhance the protection which can be provided by tagout programs under the Final Rule.

Paragraph (c)(2)(i) states that either lockout or tagout may be used when the energy isolating devices are not considered "capable of being locked out," as defined in the standard. This paragraph allows the employer to choose either system in this limited circumstances. If the employer wishes to perform modifications of the equipment to accommodate a locking device, OSHA encourages such modifications, but as noted above, the standard does not require them.

In paragraph (c)(2)(ii), OSHA requires the use of lockout if the energy isolating devices are "capable of being locked out." However, an employer may use a tagout program for this equipment, but only if the employer can demonstrate that his/her tagout program provides "full employee protection." The term "full employee protection" is set forth in paragraph (c)(3), and is discussed more fully below. In brief, "full employee protection" in this context means that where equipment is capable of being locked out, the tagout program must be shown to provide equivalent safety to lockout for such equipment. This requirement also states that the attachment of a tagout device must be at the same point as a lockout device would have been attached.

An employer who chooses to use tagout in this situation must demonstrate that tagout will provide full employee protection, as explained in paragraph (c)(3). The employer must obviously demonstrate that the tagout program meets all tagout-related requirements which are spelled out in the standard, such as proper materials and construction of the tagout devices, the durability of the tag, and the capability of the attachment means to prevent the unauthorized or accidental removal of the tagout device. However, as noted earlier, OSHA does not believe that a tagout program which simply meets the requirements of the standard will be as protective as a lockout program, even though the tagout requirements have been strengthened considerably from the proposal. In order for the employer to demonstrate that a tagout program is as protective as lockout for a lockable piece of equipment, that employer will need to show additional elements which bridge the gap between lockout and tagout. OSHA believes that these elements will need to be evaluated by the Agency on a case-by-case basis. As discussed in paragraph (c)(3)(ii), the employer must consider additional measures which will further enhance the safety of the tagout program, such as the removal of an isolating circuit element, the locking of a controlling switch, or the opening of an additional disconnecting device. By requiring that the employer made a showing of the effectiveness of tagout in situations which are otherwise amenable to lockout, the standard assures that each type of control (lockout or tagout) will provide an acceptable level of safety for those employees who must perform the servicing or maintenance on the machine or equipment. Based upon the range of variations which are possible in different situations, OSHA believes that the comparative effectiveness of any particular energy control program can be made only after examination and evaluation of the factors present at each point of application.

Several parties contended that because of statistical limitations and due to underreporting, the use of an authorized and affected employees to determine the thoroughness of their training and their knowledge of the energy control program. Although the company data would certainly be reviewed by the Agency, it would be only one element of the overall determination. Further, OSHA anticipates that if energy control-related accidents have occurred, whether or not they have been reported, the employees in the facility would have knowledge of the circumstances surrounding those accidents, weaknesses in the procedure which may have contributed to the accidents, and any steps which the employer has taken since the accident to deal with the problem.

In response to OSHA's requests for additional information, NIOSH provided additional sugggestions on elements to be included in a tagout procedure in the event that lockout would not be implemented. (Ex. 50). NIOSH agreed with OSHA that management involvement is critical for both lockout and tagout procedures. NIOSH recommended that tagout procedures be documented (written) and should include the supervisory and enforcement duties and the disciplinary actions to be implemented when the procedure is not followed. Other elements recommended, such as training and hazard isolation, were quite similar to those already included in this rule. Most of the items recommended by NIOSH have been incorporated into the Final Rule in some form.

Although OSHA has serious concerns about the feasibility of retrofitting existing equipment to be lockout-capable, the Agency has different concerns about what is to de done when such equipment is replaced, when new equipment is installed, or when major modifications or renovations are performed to existing equipment. OSHA believes that the optimal time to incorporate lockout capability is where this capability is programmed into the design of the equipment in the first instance. For example, much of today's automated and computerized equipment contains programmed instructions in computer memory which can be lost if the equipment is totally deenergized. If the equipment were designed and built either with a back-up energy source, or by the splitting of the incoming energy for computer memory and mechanical functions, with the mechanical function power supply being lockable, or with other means of maintaining the memory while allowing the mechanical elements to be deenergized and locked out, servicing or maintenance could be performed safely on the deenergized equipment without losing the programming for its proper operation. The implementation of such control methods would, in OSHA's judgment, be a relatively small element in terms of both design and cost when compared to the overall design and construction costs of the equipment.

Accordingly, paragraph (c)(2)(iii) of the Final Rule requires that new equipment ordered or purchased after the effective date of this standard, and existing equipment which otherwise undergoing extensive repair, renovation or modifications, must be provided with a capability of being locked out if such

design is feasible. This provision will assure that even if current equipment is not designed to be locked out, future generations of such equipment will have a lockout capability. Under the requirements of this Final Rule, this equipment will then be subject to the requirement to use lockout except when a tagout system can be shown to be equally effective. OSHA anticipates, however, that the designing of lockout capability into new equipment will encourage the employer to utilize that capability in the energy control program, rather than relying on tagout.

In paragraph (c)(4), OSHA requires that employers develop, document and utilize procedures for the control of potentially hazardous energy, and that the procedures clearly and specifically outline the steps to be followed, techniques to be used, and measures to be applied by the employer to assure that the procedure is used. OSHA also specifies that the employer ensure that the control measures are used by employees whenever they might be exposed to injury from the unexpected energization or start up of machines or equipment or the release of stored energy.

There were four commenters (Ex. 2–36, 2–58, 2–70 and 2–87) to this requirement for the development and utilization of a procedure. Two of these commenters (Ex. 2–36 and 2–70) objected to the use of the word "specific" when defining the elements of the procedure while one commenter interpreted the requirement as mandating a generalized procedure for each plant, as well as a specific procedure for every machine or piece of equipment. The last commenter on this issue (Ex. 2–87) suggested the standard make it clear that it may not be necessary to have multiple procedures. This commenter also alluded to the fact that the standard should require a determination that a need to control hazardous energy exists and how this should be done before work begins.

In this final standard, OSHA has retained the word "specific" when detailing the elements of the procedure. This was done to emphasize the need to have a detailed procedure, one which clearly and specifically outlines the steps to be followed. Overgeneralization can result in a document which has little or no utility to the employee who must follow the procedure. However, whereas the procedure is required to be written in detail, this does not mean that a separate procedure must be written for each and every machine or piece of equipment. Similar machines and/or equipment (those using the same type and magnitude energy) which have the same or similar types of controls can be covered with a single procedure.

The written energy control procedure required by this standard need not be overly complicated or detailed, depending on the complexity of the equipment and the control measures to be utilized. For example, if there is a single machine with a single energy source that must be isolated, and the control measure chosen is simple, such as opening an electrical disconnect and locking out that energy source during servicing, the written procedure could be very simple. The steps set forth in the standard can be incorporated into the procedure with very little detail, reflecting the lack of complexity of the control measure. In addition, the employer's procedures may not need to be unique for a single machine or task, but can apply to a group of similar machines, types of energy and tasks if a single procedure can address the hazards and the steps to be taken satisfactorily.

OSHA believes that because of the need to follow the steps in the energy control procedure carefully and specifically, and the number of variables involved in controlling hazardous energy, a documented procedure is necessary for most energy control situations. However, the Agency has determined that in certain limited situations, documentation of the procedure will not add markedly to the projections otherwise provided by the standard. These situations incorporate several common elements: First, there is a single source of hazardous energy which can be easily identified and isolated, and there is no potential for stored or residual energy in the equipment. This greatly simplifies the procedure for controlling the energy, since the single energy source is all that need to be isolated. Second, the isolation and locking out of that single energy source will totally deenergize and deactivate the machine or equipment. There are no collateral sources of energy which need to be addressed. Third, a full lockout of the energy source is achieved by a single lockout device which is under the exclusive control of the authorized employee performing the servicing or maintenance. As used in this provision, exclusive control means that the authorized employee is the only person who can affix or remove the device. The authorized employee follows all steps necessary for deenergizing the equipment, verifying the deenergization, performing the work, and reenergizing the equipment upon completion of servicing. Because the energy control elements are simple, with a single energy source being locked out and no other potential sources of unexpected activation or energization, the authorized employee can perform them without referring to a written document. Fourth, while the equipment is locked out, the servicing or maintenance cannot expose other employees to hazards. For example, shutdown and lockout of a conveyor cannot cause jams or other hazards at other conveyors which feed into the conveyor being serviced.

The exception is intended to apply to situations in which the procedure for deenergization, servicing, and reenergization can be carried out without detailed interactions of energy sources, machines, and employees. For example, a motor in a small machine shop is wired into a single electrical disconnect, with no other energy source, and the motor does not present the hazards of stored or residual energy. When the motor needs repair, the authorized employee can isolate the motor from the single energy source and lock it out, using his/her personal lockout device on the disconnect, in accordance with the procedures set forth in the standard. Under these conditions, and provided that no other employees are exposed to hazards from the servicing operation, the servicing may be performed without the need to document the energy control procedure.

When all of the conditions for the exception are met, the standard does not require the employer to document the energy control procedure. However, if the employer, in utilizing this exception, has an accident involving the machinery or equipment, in which the unexpected release of hazardous energy is a factor, this indicates the need for more formal treatment of the energy control procedure, and documentation then becomes necessary.

It should also be noted that a small business does not necessarily have small energy control problems. Much complex machinery and equipment can be found in workplaces with few employees, especially in highly-automated companies. From the standpoint of the safety to be achieved from development of and compliance with a written energy control procedure, there is nothing to indicate that a small employer needs a written procedure any less than a large employer. As discussed earlier, the available data clearly domonstrate the need for written procedures to control hazardous energy. For example, the BLS Work Injury Reports (WIR) (Ex. 3–3) indicated that printed instructions or posted

procedures had been provided to only 62 of 554 injured employees responding on this issue in the survey (See Table V, in section III of this preamble). The WIR results also clearly demonstrate the lack of differentiation of injuries based on size of establishment. Half of the total number of injuries took place in establishments of under 100 employees: Approximately 35 percent of the total number of injured employees responding to the survey were injured at workplaces with fewer than 50 employees, and another 15 percent occurred where there were between 50 and 99 employees (See Table I, in section III of this preamble). Therefore, with the limited exception discussed above, OSHA has determined that the requirements for written procedures are appropriate for all employers covered by this standard, regardless of size. The complexity of an employer's procedure will depend on the complexity of the energy control problem in the specific facility, and not on anything unique to or inherent in the number of employees or size of the facility.

It is nonetheless imperative that the employee who is performing the maintenance or servicing (who must utilize the energy control procedure) understands the hazards of the work and how to control them. It is for this reason that paragraph (c)(7)(vi) (which is also discussed below) requires, before the machine or equipment is even turned off, that the authorized employee have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the procedure to be used.

The Appendix provides employers and employees with an example of a simple lockout procedure. Where appropriate, this procedure may be used as written in the Appendix by simply filling in the blanks. This procedure is not considered unique and can be applied with considerable flexibility to groups of machines or tasks. It may also be used as a guide to develop a more specific or detailed lockout or tagout procedure. The sample would need only minor changes to methods, procedures and/or text to be acceptable for many different workplace situations.

The standard, by being written in performance language, also addresses situations in which there is a need for entirely unique lockout/tagout procedures. There may be situations which might require the entire procedure to be unique for its purpose (one of a kind) in dealing with the hazards, or the employer may only need to provide a supplement to the general procedure. For some applications, the supplement could be in the form of a check list used for gaining access to the machine or equipment and for returning it to service. The check list might address the number and locations of the energy isolating devices in order to guarantee total deenergization. In most cases, if the procedure itself takes the form of a check list, this check list would need to reflect the necessary order of energy isolation and device application.

In paragraphs (c)(5) (i) and (ii), OSHA requires that the employer provide the necessary protective materials and hardware such as locks, tags, chains, adapter pins, etc., for attachment to the energy isolating devices. The standard also requires that the devices be unique to the particular use (the only ones authorized for the purpose); that they be durable, standardized and substantial; and that they identify the user.

There were three commenters (Ex. 2–28, 2–67 and 2–80) who commented on the employer providing the necessary protective materials and hardware. One commenter (Ex. 2–28) suggested eliminating the requirement for the employer to provide the needed lockout or tagout materials or hardware. OSHA disagrees with this contention. Whereas other types of protective equipment, such as safety shoes, may be of a personal nature, the protective materials and hardware used to lockout or tagout is more machine or equipment oriented. The employer is ultimately in the best position, based upon his/her knowledge of the construction and configuration of the plant, facility and/or the type of equipment, to judge or determine the type and quantity or number of items needed in that plant or facility to effectuate the control of energy during servicing or maintenance of the machines or equipment. If the employer orders the necessary hardware, he/she can ensure that the hardware complies with the provisions of the standard (that is, that the hardware is durable, standardized, substantial and identifiable). The purchase of a larger number of those materials and hardware can also result in an overall cost savings if enough of a particular item or several items are ordered in quantity.

One of the other commenters (Ex. 2–67) recommended eliminating the need for the employer to provide tags since tags should be used only when the equipment design does not allow lockout. OSHA has previously discussed the use of tags as an acceptable energy control measure under this standard. The final commenter (Ex. 2–80) recommended changing "securing or blocking" to "blocking and/or securing, to emphasize that there may be situations when the use of a combination of energy control techniques are necessary." OSHA believes that the standard already provides for situations in which more than one energy control method is necessary. The purpose of the standard as stated in paragraph (a)(2) is to require employers to establish and utilize procedures for disabling machines or equipment in order to prevent injury to employees. What is necessary and appropriate to control hazardous energy in a given situation is one the determinations which the employer must make when implementing the program. This final standard recognizes that it may be necessary to use several different means of controlling energy simultaneously to control a particular operation.

The standard utilizes performance language in imposing the above requirements. OSHA believes that the obligations imposed by paragraphs (c)(5) (i) and (ii) are not overly restrictive or complicated. To meet the requirement in paragraph (c)(5)(i) to supply protective equipment and hardware, the employer can either issue devices to each employee responsible for implementing energy control measures, or can exercise the option of simply having a sufficient quantity of the devices on hand at any given time and assign or distribute them to employees as the need arises. As noted earlier, all authorized employees will need to have these devices available to attach to energy isolating devices whenever they perform servicing or maintenance using the energy control procedure.

The proposed standard specified that lockout or tagout devices be singularly identified, shall be the only devices used for controlling hazardous energy, shall not be used for other purposes, and shall be durable, standardized, substantial, and identifiable. This requirement remains substantially unchanged in the Final Rule. Three commenters (Ex. 2–53, 2–64 and 2–70) objected to not allowing energy control devices to be used for other purposes. This restriction was proposed, and is being adopted to ensure that the sight of a distinctive lock or tag will provide a constant message of the use that the device is being put to and the restrictions which this device is intended to convey. If lockout or tagout devices are used for other purposes, they can lose their significance in the workplace. For the energy control procedure to be effective, these devices must have a single meaning to employees: "Do not energize the equipment when such a device is affixed to it."

In paragraph (c)(5)(ii)(A) OSHA proposed that lockout or tagout devices be durable. There was no specific comment on this provision. In order to overcome some of the concerns of commenters to the use of tags, OSHA is adding in the Final Rule that tagout devices must be constructed and printed so that exposure to weather or other environmental conditions which exist in the workplace will not cause the tag to become unserviceable and/or the message on the tag to become illegible. For any sign, tag or other message bearing item, the message must remain legible for the employees to be able to ascertain the meaning and intent of the message.

In paragraph (c)(5)(ii)(B) OSHA is requiring that lockout or tagout devices be standardized in one of the following criteria: color, shape, size, print or format, in order that they be readily identificable and distinguished from other similar devices found in the workplace. In addition, the final rule adds a requirement for the use of a standardized print and format for tagout devices. This is done to ensure that the tagout devices, which rely exclusively on employee recognition for their effectiveness, will be so unique as to minimize the chances of their being misidentified or their message misinterpreted.

In paragraph (c)(5)(ii)(C) OSHA requires that lockout or tagout devices be substantial enough to minimize the possibility of premature removal. The standard requires that lockout devices be substantial enough to prevent their removal without the use of excessive force or unusual techniques. Tagout devices and their means of attachment are similarly required to be constructed so that the potential for inadvertent or accidental removal is minimized. Tag attachment means are further required to be attachable by hand, and to be of strength equivalent to a one-piece non-releasable, self locking cable tie. These additional requirements are being imposed to ensure that tags do not become disconnected or lost during use, thereby negating their effectiveness.

In item (d), OSHA requires that lockout or tagout devices identify the employee who applies the device or devices. This requirement is similar to the proposal. Identification of the user provides an additional degree of accountability to the overall program. It enables the employer to inspect the application of the energy control procedure and determine which employees are properly implementing its requirements. If locks or tags are not being properly attached by an employee, identification on the locks and tags will enable the employer to locate that employee and correct the problem promptly, including additional training, as necessary. For other employees, this requirement will enable them to determine at a glance which authorized employees are performing a given servicing operation. It puts them on notice that if questions arise about the servicing or the energy control procedure, the persons listed on the lockout and tagout devices are the appropriate persons to ask. The authorized employee has the additional assurance that other employees know of his/her involvement in the servicing, and that only he/she is allowed to remove the device.

There were three commenters (Ex. 2–21, 2–36 and 2–62) who objected to having to mark or identify locks. These commenters claimed that identifying a lockout device with a particular employee was unnecessary. OSHA believes that knowing who applied a lockout device to a machine or equipment can save time and lives. If an employee, upon completing a job, forgets to remove a lockout device, the identity of the employee can be immediately determined and the employee made available to complete the procedure. If that employee cannot be located, it is possible that he/she is still working on the equipment. It would then be possible to check out the area and assure that the employee and others are out of the danger area before the device is removed. Marking a lockout or tagout device is a simple way of identifying the person who applies it, and can prevent the inadvertent reenergization or reactivation of equipment before that employee has been located and has moved clear of the equipment. Thus, marking the identity of the employee who uses a lockout or tagout device is an appropriate safeguard.

Marking of the lockout or tagout devices can also promote a sense of security in employees, in that each device is the individual employee's device, used only for his or her protection. This sense of identity also can be used to encourage willing utilization of the energy control procedure. When an employee can identify with a part of the program he/she controls for his/her own protection, that employee will likely be an active participant in making the program work.

In paragraph (c)(5)(iii), OSHA states that the legend (major message) on tagout devices must warn against hazardous conditions if the equipment is re-energized. Five examples of major message are provided in paragraph (c)(5)(iii): Do Not Start, Do Not Open, Do Not Close, Do Not Energize, and Do Not Operate. OSHA recognizes, however, that these messages may not be sufficient to cover all conditions involving hazardous energy control. For that reason, the above stated legends are only examples of what must be stated. The use of graphics, pictographs or other symbols to convey the message which the tag represents serves the same purpose as the written message and therefore would be acceptable to OSHA. Additionally, the use of danger tags would have to meet the requirements of § 1910.145.

There were 8 commenters (Ex. 2–20, 2–32, 2–36, 2–41, 2–53, 2–62, 2–70 and 2–74) who discussed the requirement contained in (c)(5)(iii). Three of the commenters (Ex. 2–36, 2–53 and 2–62) suggested elimination of the wording in the requirement "shall warn against hazardous conditions if the equipment is re-energized." This is a statement of the purpose of the tag. The significance of this message is imparted through the training of employees and enforcement of the program. The backbone of a tagout system is that when a tagout device is placed on an energy isolating device, it informs employees that the energy isolating device is not to be turned on or otherwise moved to a position which will allow the flow of energy. The printed message on the tag provides information about what the tag stands for and what it prohibits, and indicates the name of the employee who affixed it to the energy isolating device.

Three of the commenters (Ex. 2–32, 2–41 and 2–70) commented on the language of the proposal "and shall include the legends: * * * or similar language." Two of the commenters (Ex. 2–32 and 2–70) suggested amending the wording of the phrase to say, "and shall include the following legends: * * *" The proposal was intended to require that tags have some type of commonly used message which would serve to prohibit an employee from bypassing or disregarding the tag. The items listed (that is, "Do Not Start", "Do Not Open" etc.) were intended not to be an all inclusive or complete list of the possibilities but rather, to give an indication of the type of prohibitive major message which the tag could contain. Clearly, whatever language is chosen for the message of the tag must coincide with the prohibited action. Further, employees must know and understand that the tag really means "do not touch," regardless of the type of equipment or hazard involved.

Due to the severity of the risks associated with a lapse in the

implementation of the energy control system, paragraph (c)(6) requires that periodic inspections be performed at least annually in order to verify and to ensure that the energy control program is being properly utilized. One method for meeting the performance requirements in this paragraph would be to use random audits and planned visual observations to determine the extent of employee compliance. Another would include modifying and adopting ordinary plant safety tours to suit this purpose.

The periodic inspection is intended to assure that the energy control procedures continue to be implemented properly, and that the employees involved are familiar with their responsibilities under those procedures. A significant change in this requirement from the proposal involves the activities of the person performing the inspections. The inspector, who is required to be an authorized person not involved in the energy control procedure being inspected, must be able to determine three things: first, whether the steps in the energy control procedure are being followed; second, whether the employees involved know their responsibilities under the procedure; and third, whether the procedure is adequate to provide the necessary protection, and what changes, if any, are needed. The inspector will need to observe and talk with the employees in order to make these determinations. The Final Rule provides some additional guidance as to the inspector's duties in performing periodic inspections, to assure that he or she obtains the necessary information about the energy control procedure and its effectiveness. Where lockout is used, the inspector must review each authorized employee's responsibilities under the procedure with that employee. This does not necessarily require separate one-on-one meetings, but can involve the inspector meeting with the whole servicing crew at one time. Indeed, group meetings can be the most effective way of dealing with this situation, because it reinforces the employees' and that they need to follow the procedure carefully. Where tagout is used, the inspector's review of responsibilities extends to affected employees as well, because of the increased importance of their role in avoiding accidental or inadvertent activation of the equipment or machinery being serviced. OSHA believes that these reviews, which will need to be performed on at least an annual basis during the periodic inspections, will assure that employees follow and maintain proficiency in the energy control procedure, and that the inspector will be better able to determine whether changes are needed.

A related change from the proposal is found in the certification provision in paragraph (c)(6)(ii) of the Final Rule. In addition to the operation, date of inspection, and name of inspector, the Final Rule also requires identification of the employees included in the inspection. This change provides for the inspector to indicate which employees were involved with the servicing operation being inspected, in order to assure that these employees have had the opportunity to review their responsibilities and demonstrate their performance under the procedure.

Inspections must be made by an authorized employee other than one implementing the energy control procedure being inspected. The inspections must be designed and conducted to correct any deviations uncovered. In addition, the employer must certify that they have been performed. These inspections are intended to provide for immediate feedback and action by the employer to correct any inadequacies observed.

These inspections are intended to ensure that the energy control procedure has been properly implemented and to provide an essential check on the continued utilization of the procedure.

Some commenters (cf. Ex. 2–4, 2–39) suggested that the standard require employee participation in these inspections. However, the employer has the obligation of assuring proper utilization of the energy control procedure under the standard, and the periodic inspection is a means of assuring that such compliance is taking place. If an inspection reveals flaws in the implementation of the procedure, it is the employer who must make changes in the procedure, provide retraining to employees, and take other steps to make sure that the problems are corrected. Therefore, OSHA does not believe that a requirement for employee involvement in these inspections is necessary under the OSH Act. It should be noted that the standard requires such inspections to be performed by an authorized employee other than one implementing the particular procedure. Because the inspector is also an authorized employee, he/she will have the necessary knowledge to evaluate the effectiveness of the procedure being inspected, and to report back to the employer with regard to necessary corrective measures.

In this final standard, OSHA has retained the requirement for a periodic inspection (at least annually) to ensure that the energy control procedure required by this standard is being followed. Inspections must be done by authorized employees and are intended to identify and correct any deviations or inadequacies observed. The final standard retains the requirement for the inspections to be conducted by authorized employees, in order to assure that the work. (See paragraph (b) of the standard and the explanation of paragraph (c)(7) below.)

OSHA believes that periodic inspections by the employer are necessary to ensure continued compliance with the procedure. Therefore, this requirement remains unchanged.

In paragraph (c)(7), OSHA specifies that the employer provide effective initial training, periodic retraining, and certification of such training of employees. OSHA considers these requirements to be of critical importance in helping to ensure that the applicable provisions of the hazardous energy control procedure(s) are known, understood and strictly adhered to by employees.

As it is the case with the other provisions of this generic rule, OSHA believes that the training program under this standard needs to be performance oriented, in order to deal with the wide range of workplaces covered by the standard. However, in order to provide adequate information, any training program under this standard will need to cover at least three areas: The employer's energy control program, the elements of the energy control procedure which are relevant to the employee's duties, and the requirements of this Final Rule. The details will necessarily vary from workplace to workplace, and even from employee to employee within a single workplace, depending upon the complexity of the equipment and the procedure, the employee's job duties and their responsibilities under the energy control program, and other factors. Paragraphs (c)(7)(i) (A), (B), and (C) of the standard establish the amount of training that is required for the three groups of employees: "authorized" employees, "affected" employees, and all "other" employees. The relative degree of knowledge required by these three employee groups is in descending order, with the requirements for authorized employees demanding the most effort in training. Because authorized employees are charged with the responsibility for implementing energy control procedures, it is important that they receive training in recognizing and understanding all potentially hazardous energy sources

that they might be exposed to during their work assignments, and that they also be trained in the use of adequate methods and means for the control of such energy sources. These employees are the ones authorized to implement the energy control procedure and to perform servicing of the machine or equipment. Therefore, they need extensive training in aspects of the procedure and its proper utilization, together with all relevant information about the equipment being serviced.

The training OSHA requires for "affected employees" is less stringent than that for "authorized employees," simply because affected employees do not perform servicing or maintenance operations which are performed under an energy control procedure. Affected employees are important to the overall protection provided in the energy control program, however, because such employees work in areas where the program is being utilized by authorized employees. It is vital to the safety of the authorized employees that the affected employees recognize lockout or tagout devices immediately, that they know about the purpose of those devices, and, most importantly, that they know not to disturb the lockout or tagout devices or the equipment to which the devices are affixed. Therefore, the standard requires that affected employees be instructed in these matters. The instruction needs to be sufficient to enable the employees to determine if a control measure is in use. The instruction also needs to make affected employees aware that disregarding or violating the prohibitions imposed by the energy control program could endanger their own lives, or the lives of coworkers. Considerable latitude is given to employers in the development and implementation of the required training for both authorized and affected employees.

There was considerable comment on the training of the different classes of employees based upon the definitions and duties of the different employees as enumerated in the proposed standard. Five commenters (Ex. 2–5, 2–32, 2–44, 2–67 and 2–74) objected to different training for authorized and affected employees while 10 commenters (Ex. 2–28, 2–36, 2–39, 2–42, 2–46, 2–55, 2–58, 2–70, 2–73 and 2–85) objected to training "other" employees. One commenter (Ex. 2–27) suggested expanding the training to coincide with the training requirements of other OSHA standards.

The training requirements for the different classes or types of employees as they are defined in this final standard are performance oriented, thereby providing the employer with considerable flexibility in how the training should be conducted. The employer is permitted to use whatever method he/she feels will best accomplish the objective of the training.

OSHA also requires in paragraph (c)(7)(i)(C) that all other employees shall be instructed about the restrictions imposed upon all employees by the energy control program. This instruction as the employer's lockout/tagout procedure can be conveyed during new employee orientation sessions, by the use of employee handbooks, or through regularly scheduled safety meetings. The training of employees other than authorized and affected employees is considered by OSHA to be essential since other employees working in the plant or facility have been known to have turned on the power to a machine or equipment on which another employee is performing a servicing or maintenance activity. Inadvertent and intentional activation of machines or equipment by employees other than those working on the machine or equipment is not limited to affected employees. The training requirements for these other employees are minimal, essentially required only that these employees know what the energy control program does and that they are not to touch any locks, tags or equipment covered by this program.

In paragraph (c)(7)(ii), OSHA is establishing a requirement for additional training for all employees in plants or facilities where tagout is the preferred method of energy control. The need for this additional or supplemental training for employees in those facilities is based upon the fact that the use of tagout relies upon the knowledge of the employees and their adherence to the limitation imposed by the use of tags. Several commenters who use tagout programs stated in their comments and testimony (cf Ex. 47, 52, Tr. p. W2–5, W2–27 and H199–207) that tagout can only be effective when the program provides for extensive training and reinforcement of the elements of the tagout procedures.

In paragraph (c)(7)(iii), OSHA requires that periodic retraining be provided for authorized employees *at least annually*. This retraining may need to be conducted more frequently, that is, whenever and inspection under paragraph (c)(6) reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the energy control procedure.

Many participants and commenters (Ex. 2–29, 2–44, 2–57, 2–63, 2–97, 50, 52, 60, 62, Tr. p. W1–55, W1–165, W1–208, W1–263, W2–83, H85, H159, H166) suggested that the basic requirement for retraining should provide for the training to be conducted on a regular basis at specified minimum intervals. These commenters pointed out the fact that although the proposal said that the retraining shall be periodic, the criteria for conducting the training was based solely upon the periodic inspection or the employer having reason to believe that there were program problems.

The above comments and testimony clearly indicated that the "periodic" training in the energy control procedure needs to be provided at a minimum stated interval, rather than relying solely upon the employer's periodic inspection. Based on many current training programs, including those throughout the automobile industry it was argued that annual retraining would provide adequate assurance that employees understand their duties under abilities to carry out the energy control procedure.

There were 13 commenters (Ex. 2–20, 2–32, 2–36, 2–39, 2–41, 2–43, 2–44, 2–52, 2–62, 2–69, 2–70, 2–74 and 2–87) who suggested limiting retraining to those individuals and in those instances when there is an identified problem. These commenters reasoned that retraining should not be required unless there is some indication to the employer that it is needed.

OSHA believes that the effectiveness of training diminishes as the time from the last training session increases. Without the imposition of a requirement for periodic retraining of the employees who are critical to the success of the energy control program, that is, the persons who must utilize the procedure, the overall effectiveness of the energy control program will diminish over an extended period of time. The Agency has determined that the proposed provision, i.e., simply relying upon the finding of a problem with the program to trigger the retraining program, does not properly address the problem. Retraining is intended to provide for continued proficiency, and not merely to remedy situations in which such proficiency has been found wanting.

In addition to the periodic retraining as discussed above, additional retraining is to be conducted whenever a problem is identified during periodic inspections, or whenever the employer has reason to believe that there are problems with the energy control procedure itself or with its implementation. This retraining should be more concentrated or more encompassing than the routine retraining, based upon the severity of

the problem encountered with the use of the energy control program in the workplace.

OSHA is of the opinion that full and uniform utilization of an energy control procedure is necessary in order for that procedure to maintain its effectiveness. Every effort should be made during the periodic inspection performed under paragraph (c)(6) to determine whether or not the procedure is being used properly. If deviations are observed, retraining in accordance with paragraph (c)(7)(iii)(B) would be required. However, retraining could be triggered by events separate from the finding of a periodic inspection. For example, an employee working with an energy control procedure might be injured in the course of his duties, or there might be a "near miss," where no one is actually injured, but where the energy control program has failed nonetheless. If a subsequent investigation indicates that an employee failed to operate within the guidelines of the control procedure, retraining would be required.

In addition, the investigation might also reveal that the procedure itself was not adequate. Such inadequacies in the procedure could be the result of using a general procedure that does not handle effectively a specific application, or they may arise because changes have been made to the equipment or process that did not take the existing energy control procedure into consideration. In such cases when changes to the energy control procedure must be made, the employer is required to retrain employees in the new or revised procedures in accordance with paragraph (c)(7)(iii)(B).

In the Final Rule, when lockout is being implemented, OSHA is limiting the annual retraining requirement to authorized employees. These are the employees who must implement the energy control procedure, and their protection is the primary consideration under this standard. Because their safety requires them to follow the steps of the procedure precisely, these employees must be properly trained, and that training must be reinforced to assure their continued proficiency. By contrast, affected employees are not provided with annual retraining under this standard when lockout is used. In these situations, affected employees are initially trained about the energy control procedure and its implementation, and the relevance of that procedure to his/her work. Under lockout conditions, the essential element of the affected employee's training is a simple one: Locks are not to be defeated or bypassed, and locked out equipment must remain deenergized. This message is reinforced whenever the affected employees work in an area where energy control procedures are being implemented, because paragraph (c)(9) of the standard requires that such employees be notified before the energy control devices are applied. Further, when a lockout device is attached to a piece of equipment by an authorized employee, an affected employee should not be able to remove the lock, and thus will not have the potential of placing the authorized employee in danger.

By contrast, however, paragraph (c)(7)(iv) of the Final Rule requires that when tagout is used, both authorized and affected employees must be retrained annually in the use of the tagout system. This additional training is necessary because of the inherent difficulties of tagout systems as opposed to lockout: The use of tags relies uniquely upon the knowledge and training of the employees involved, and the continued reinforcement of the meaning of the tags. In a lockout system, even if an affected employee has not been adequately trained, the lock will prevent that employee from reenergizing the equipment. Tags, on the other hand, can be inadvertently or intentionally bypassed or ignored by an affected employee, because the tags do not actually prevent the activation of the tagged and equipment. Employees operating under a tagging system must be constantly vigilant, and their awareness of the importance of the tagout device must be frequently reinforced. OSHA believes that when tagout is used, retraining must be provided on at least an annual basis, in order to maximize its effectiveness.

Paragraph (c)(7)(v) requires that employers certify that the training required by this standard has been provided. This requirement is unchanged from the proposal. Certifications are intended to cover both the initial training and the periodic retraining. In addition to certifications, the employer must be able to demonstrate that the training includes all elements of the energy control procedure which are directly relevant to the duties of the employee. The adequacy of the training can be evaluated by the employer, employee, and OSHA alike, by comparing the elements of the training to the elements of the procedure, which is required to be in written form.

Several commenters recommended that there be a "record," rather than a "certification," that training has been performed (cf, Ex. 2–39, 2–62 and 2–69). OSHA believes that a written certification serves the same purpose, while minimizing the paperwork burden on employers. It should be noted that the certification is not intended as a means of evaluating the completeness or efficacy of the training; it only provides an indication that training has been performed. The quality and content of the training are not evaluated through the certification of performance. As noted earlier, the standard sets forth the elements which must be included in the training for the employees. In evaluating whether an employee has been adequately trained, OSHA will examine the employee's responsibilities under the energy control program in relation to the elements of the standard.

OSHA proposed in paragraph (c)(6), that energy isolating devices used for the control of potentially hazardous energy sources, including valves, be marked or labeled to identify the equipment supplied and the energy type and magnitude, unless they are positioned and arranged so that these elements are evident, and that the devices only be operated by authorized employees. OSHA reasoned that employees working with energy control procedures need adequate information about the hazards of the equipment that they are servicing, and they must be certain that the equipment they are working on is the same equipment that was intended to be disabled. They should feel confident that they have secured the correct energy control devices and are protected from the hazards of inadvertently working on energized equipment.

The proposed identification requirement of paragraph (c)(6)(i) would have applied to all energy isolating devices, including devices which control hydraulic, pneumatic, steam, and similar energy sources by the use of valves or similar devices to isolate and block energy flow. It would also have applied to the valves used in pipeline network process operations, such as those found in petroleum and chemical operations.

The proposed requirement for marking or labeling energy isolating devices to identify the equipment supplied and the type and magnitude of the energy, received considerable comment. Eleven commenters (Ex. 2–14, 2–20, 2–28, 2–32, 2–39, 2–51, 2–52, 2–53, 2–58, 2–68 and 2–70) questioned the need to specify the magnitude of the energy while two commenters (Ex. 2–32 and 2–34) questioned the ability to mark valves, etc. when the material and the magnitude of the energy contained in the material conveyed could be almost continuously variable. Seven commenters (Ex. 2–21, 2–34, 2–39, 2–46,

2–61, 2–69 and 2–70) suggested removing the requirement. Five commenters (Ex. 2–22, 2–44, 2–52, 2–58 and 2–59) proposed allowing the use of drawings, schematics, temporary tags or work permits to serve as an alternative to marking or labeling energy isolating devices. Two commenters (Ex. 2–39 and 2–62) recommended that training of qualified persons would supply the information rather than marking the energy isolating devices.

OSHA has determined that the marking or labeling of energy isolating devices is not reasonably necessary for the effectiveness of the energy control program. When employees need to know details on energy sources for protection under the standard, the energy control procedure is required to spell out this information, and the training must incorporate it, as well. For example, authorized employees, in order to perform their servicing or maintenance duties under the energy control procedure, are required to know the type and magnitude of the energy sources which must be controlled. The marking or labeling of the sources themselves will not provide the authorized employees with any additional information. Second, as far as affected or other employees are concerned, their role in the energy control program is essentially to understand what the program is designed to accomplish, and to recognized that when they see an energy isolating device with a tag and/or lock on it, they are not to touch the equipment, regardless of what the type and magnitude of the energy might be. OSHA believes that marking the equipment with this information would not enhance the protection of these employees, because their compliance with the energy control procedure does not depend upon knowledge of these details.

Accordingly, OSHA has eliminated the proposed requirement for marking or labeling energy isolating devices. In its place, OSHA is incorporating a specific requirement in paragraph (c)(7)(i)(A) that authorized employees be trained in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and in the methods and means necessary for energy isolation and control. OSHA further requires in paragraph (c)(7)(vi) that authorized employees must know the type and magnitude of the energy, the hazards of the energy to be controlled and the method or means to control the energy even before the machine or equipment is turned off. OSHA believes that employee knowledge of this information is essential to ensure that the correct energy control devices are used on the proper energy isolating devices and in the proper manner. This provision requires the employee to have that specific information prior to deenergizing the equipment, in order to control the energy and render the machine or equipment safe to work on. OSHA does recognize that the physical shutdown of the machine or equipment can be accomplished by either the authorized or affected employee.

The new paragraph (c)(8) requires that lockout or tagout be performed only by authorized employees. These are the only employees who are required to be trained to know in detail about the types of energy available in the workplace and how to control the hazards of that energy. Only properly trained and qualified employees can be relied on to deenergize and to properly lockout or tagout machines or equipment which are being serviced or maintained, in order to ensure that the work will be accomplished safely.

In paragraph (c)(9), OSHA requires that whenever lockout or tagout control might directly affect another employee's work activities, the employer or authorized employee must notify the affected employee before taking any action to apply or to remove lockout or tagout devices.

There were four commenters (Ex. 2–20, 2–21, 2–64 and 2–74) who discussed this provision. One commenter (Ex. 2–20) recommended that the notification occur after removal of the energy control device while one person (Ex. 2–21) suggested that the "qualified" persons not be required to notify affected employees of the energy control device removal, particularly in emergency repair conditions. Finally, two commenters (Ex. 2–64 and 2–74) insisted that the requirement was unnecessary, especially since employees must be trained and the lockout or tagout effectively prevents machine or equipment energization.

OSHA believes that this requirement is an essential component of the total energy control program. Notification of affected employees when lockout or tagout is going to be applied provides the perfect opportunity for the employer or authorized employee who notifies them of the impending interruption of the normal production operation to remind them and reinforce the importance of the restrictions imposed upon them by the energy control program.

OSHA believes that these measures are important to ensure that employees who operate or use machines or equipment do not unknowingly attempt to reenergize those machines or equipment that have been taken out of service and deenergized for the performance of activities covered by this standard. The lack of information regarding the status of the equipment could endanger both the servicing employees and the employees attempting to reenergize or operate the equipment. Such notification is also needed after servicing is completed to assure that employees know when the control measures have been removed. Without such information, employees might mistakenly believe that a system is still deenergized and that it is safe to continue working on or around it.

This standard for the control of hazardous energy is a "generic" standard, and is written largely in terms of the procedures and performance to be achieved. OSHA does not consider it practical to prescribe specific definitive criteria for each possible use of energy control measures in such a wide ranging standard. However, the Agency believes that the standard will enable the user to make a choice of the most effective control measure involving the use of locks or tags, or a combination of the two devices for securing energy isolating devices. (As discussed above, paragraph (c) of the standard provides criteria for the selection of such devices.)

The main thrust of the standard is to mandate the development, documentation and implementation of control procedures, and this is to be accomplished as outlined in paragraph (d) of the standard. The employer is given considerable flexibility in developing a control program, and such a program will be evaluated by OSHA compliance officers to determine whether it meets all the criteria in this standard.

Although the Final Rule notes the Agency preference for lockout, this standard does not impose lockout requirements in all cases for reasons discussed earlier. OSHA intends to address the need for and the feasibility of more specific lockout or tagout requirements for particular types of equipment or processes on an individual basis, as appropriate, in future rulemakings. This will involve revision of existing standards and promulgation of new ones, as necessary. (Examples of current provisions in the OSHA standards which contain specific lockout/tagout requirements can be found in the previous discussion of proposed paragraph (a)(3)(iii).)

Paragraph (d) of both the proposal and Final Rule provides that five

separate and distinct steps be followed in meeting the procedural requirements of paragraph (c)(1) (Procedure) and the application of energy control (lockout or tagout) measures, and that the actions be taken in the sequence presented. Paragraph (d)(1) requires that in preparation for shutdown of machinery or equipment, the authorized employee must know about the type and magnitude of the energy, the hazards involved, and the means of controlling them. Paragraph (d)(2) then requires that the machine or equipment be turned off or shut down by an authorized employee according to the established procedures. This is the starting point for all subsequent actions necessary to put the machine or equipment in a state that will permit employees to work on it safely.

In many operations, activation of an electrical push-button control or the movement of a simple throw switch (electrical, hydraulic, or pneumatic) to the "stop" or "off" mode is sufficient to meet this provision. In other cases, however, such as those found typically in a refining or chemical process, there are control devices that do not necessarily address an "off-on" or "start-stop" condition (i.e., level controls, pressure controllers, etc.). In these instances, a series of predetermined steps may be necessary to achieve a shutdown of the machine or equipment.

One commenter (Ex. 2–28) suggested that any qualified (trained) employee be allowed to shut down or turn off machines or equipment. Another commenter (Ex. 2–41) suggested allowing machine operators to shut down or turn off the equipment. OSHA is aware that although an authorized employee would usually have the necessary knowledge and capability to shut down machines or equipment, a machine or equipment operator or user should also be in a position and know how to shut down the machine or equipment he/she is utilizing. In many cases, allowing a machine or equipment operator or user to shut it down when something goes wrong may save time and money, and may possibly avoid an accident. In many cases, the affected employee may be infinitely more familiar with the shutdown procedure for a machine or equipment, and would be able to accomplish the shutdown more rapidly and safely than an authorized person who does not work with that particular machine or equipment every day.

In the event that a machine or equipment malfunctions, the wise and prudent thing to do in most cases is to require that the machine or equipment be immediately shut down. Shutting down a machine or equipment is analogous to stopping the production operation. Contrary to the opinion of one commenter (Ex. 2–71) who stated that OSHA should not mandate equipment shut down as the mandatory first step of the procedure, OSHA believes that stopping the machine's production function is the necessary and appropriate first step in the procedure. This commenter suggested that some machinery should have components moved to a safe position before shutting off the power. OSHA believes that the necessary first step is to interrupt the production process to allow non-servicing (affected) personnel to move clear of the machinery or equipment. Once this is done and employees are not exposed to a hazard, the machine or equipment can be restarted by the authorized employee under the guidelines of paragraph (f)(1) when necessary to allow positioning of the machine or equipment, or components thereof.

Following shutdown of the machine or equipment as outlined in (d)(2), paragraph (d)(3), as the next step in the procedure, provides that energy isolation devices be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s). For example, once an electrical push-button control has been utilized to stop the movement of machine or equipment parts as the first step of the shutdown procedure, isolation can then be accomplished by ensuring that the push-button circuitry cannot be supplied with additional electrical energy. For such equipment, the isolation requirement can be accomplished by the employee's actions in tracing the path from the control toward the energy source until he/she locates the energy isolating device, and moving the energy isolating device control lever to the "safe," "off," or "open" position. Performing these actions will prevent the reintroduction of energy to the push-button circuitry and will isolate the operating control and the machine or equipment from the energy source.

One commenter (Ex. 2–41) suggested that OSHA add the restriction that only authorized employees be allowed to either locate and operate or supervise the operation of energy isolating devices. Instead of adding individual restrictions to each of the procedural steps of the standard, OSHA has added a new paragraph (c)(8) to the final standard which requires that all steps of the procedure except initial shutdown of the equipment as provided in paragraph (d)(1) be performed only by authorized employees. Since the use of lockout or tagout is presumed by OSHA to be individual protection, identification and operation of the energy isolating devices must be done only by the authorized employees who are applying the locks or tags under the procedures.

As the fourth step in the procedure, paragraph (d)(4) provides that action be taken to secure the energy isolating devices in a "safe" or "off" position. This paragraph requires that appropriate and effective lockout or tagout devices be affixed to each energy isolating device by the authorized employee, and that they be attached so as to prevent reactivation of the machine or equipment.

Where no specific standard presently requires the use of lockout versus tagout, paragraph (d)(4) requires the employer to select an appropriate and effective method, in accordance with the criteria set forth in paragraph (c)(2) above. OSHA is of the opinion that, as a general rule, when it is feasible, the physical protection offered by the use of a lock, when supported by the information provided on a tag used in conjunction with the lock, provides the greatest assurance of employee protection from the release of hazardous energy. OSHA has discussed in the section entitled "Major Issues" the arguments for the use of lockout and tagout.

Paragraph (d)(5) provides that the next step taken in the energy control procedure is to determine the presence of, and relieve, disconnect and/or restrain all potentially hazardous, stored or residual energy in the machine or equipment. Up to this point, the purpose of following all the steps of the procedure has been to enable the employee to isolate and block the source of energy feeding the machine or equipment to be worked on, at a point beyond which it can not be bypassed. However, energy can very easily be trapped in a system downstream from an energy isolating device, or can be present in the form of potential energy from gravity or from spring action. Stored or residual energy of this sort cannot be turned on or off; it must be dissipated or controlled.

When energy may still be present in a system that has been isolated from the energy source, this paragraph requires that energy to be controlled before an employee attempts to perform any work covered by the scope of the standard. Compliance with this provision might require, for example, the use of blocks or other physical restraints to immobilize

the machine, machine components, or equipment where necessary for control of the hazard. In the case of electrical circuits, grounding might be necessary to discharge hazardous energy. Hydraulic or pneumatic systems might necessitate the use of bleed valves to relieve the pressure.

There were four commenters (Ex. 2–32, 2–71, 2–74 and 2–80) who discussed the requirement for the release or restraint of stored or residual energy. One commenter (Ex. 2–71) pointed out that there are several types of stored or potential energy which only the concept of zero mechanical state (ZMS) adequately covers. Examples of these hazards are machinery components which run on a cam or other concentric. For this type of machinery, the cam or concentric dictates the motion of the component or pivotal machine components which could be set in motion by inadvertent employee contact.

ZMS is the concept which was originally developed to simplify the requirements for disabling sophisticated machines and processes by reducing the possibility of mechanical movement to a minimum. The concept of ZMS is spelled out in the ANSI Z241.1–1975 American National Standard Safety Requirements for Sand Preparation, Molding and Coremaking in the Sand Foundry Industry. (Ex. 2–71). ZMS specifies that every power source that can produce movement of a machine member must be locked out.

OSHA has reviewed this aforementioned consensus standard and believes that adoption of this OSHA standard will better effectuate the purposes of the OSH Act. The OSHA standard requires the adoption and utilization of a complete program for the control of hazardous energy, including energy sources not specifically addressed by the ANSI Z241.1 standard. Further, OSHA believes that the energy control procedures established in this final rule are consistent in most respects with those of ANSI Z241.1.

The Final Rule addresses these and other hazards of stored or residual energy in a performance manner. Rather than trying to determine all of the potential manners in which this energy can be stored or retained in machines, equipment and the materials being utilized in the production process, as noted earlier, OSHA requires in paragraph (d)(1) that the authorized employee must have knowledge of the energy, its hazard and how to control it (including stored or residual energy). This paragraph (d)(4) requires the stored or residual energy to be relieved, disconnected, restrained or otherwise rendered safe as part of the energy control procedure.

One commenter (Ex. 2–74) suggested adding the phrase, "unless stored mechanical energy is a necessary element in the equipment or process." OSHA has answered this objection by requiring in this provision that stored or residual energy must be rendered safe before the servicing or maintenance may be conducted. OSHA believes that if stored or residual energy is hazardous, something must be done to protect the employees.

One commenter (Ex. 2–80) said that OSHA should consider a block, chain or other instrument used for restraining stored or residual energy to be a type of energy isolating device which does not require a lock or tag. Although OSHA defines a block as a form of energy isolating device, the requirement for the use of locks or tags is separate and distinct from the requirement for restraining stored or residual energy and the addition of a lock or tag, in most cases, would not materially add to the effectiveness of the block.

One commenter (Ex. 2–32) suggested making it clear that the stored or residual energy is only that which is downstream from the energy isolating device. OSHA acknowledges that the standard is intended to control energy as it relates to the energy isolating device and the machine or equipment being serviced, and that the only stored or residual energy addressed by the standard is that which could reenergize that equipment or be released while the servicing operation is being performed.

In paragraph (d)(4)(ii) the standard requires that verification of isolation shall be continued until the servicing or maintenance is completed when the possibility of the reaccumulation of stored energy exists. There was one commenter (Ex. 2–32) who stated that no work should be allowed to proceed until there is assurance that reaccumulation of stored energy cannot occur.

OSHA believes that this requirement of the standard should remain as proposed since there is no manner to ensure that some leakage or drainage of energy or energy containing substances, such as supercooled or cryogenic fluids, can occur. In the case of one of those substances being present in a piping, containment or transport system, a certain amount of leakage may occur without endangering employees. However, if servicing or maintenance must be performed on such a system, the standard requires the employer to continue to verify the isolation of energy sources which may be hazardous, in order to assure that such leakage does not approach a dangerous level. This may involve means such as continuous monitoring for the displacement of oxygen or the buildup of the concentration of the substance toward the lower explosive limit of the substance, such as could occur with a hydrogen system.

In paragraph (d)(6), as the sixth step in the energy control procedure, the authorized employee must ensure that the previous steps of the procedure have been taken to isolate the machine or equipment effectively. This must be done prior to starting the servicing or maintenance work. The authorized employee needs to verify that the machine or equipment has been turned off or shut down properly as required by paragraph (d)(2) of this standard; that all energy isolating devices were identified, located and operated as required by paragraph (d)(3); that the lockout or tagout devices have been attached to energy isolating devices as required by paragraph (d)(4); and that stored energy has been rendered safe as required by paragraph (d)(5).

This step of the procedure may involve a deliberate attempt to start up equipment which should not be capable of activation because of the application of the energy control devices. It is an action intended to assure the employee that energy from the main power source has been effectively isolated, that residual or stored energy has been blocked and that injury could not result from inadvertent activation of the operating controls. Another means of testing the machine or equipment is by the use of appropriate test instrumentation. This method would be appropriate for use in cases involving electrical circuits and equipment, for example, where verification of isolation could be accomplished by using a voltmeter to determine that there is no electrical energy available to the machine. Similar test equipment can be utilized to test for the presence of other energy types and sources.

OSHA also considers the use of visual inspection procedures to be of critical importance throughout the lockout or tagout procedures. Visual inspection can confirm that switches, valves, breakers, etc. have been properly moved to and secured in the "off" or "safe" position. Observing the position of the electrical main power disconnect switch can, for example, confirm that the switch is either in the "off" (open) or "on" (closed) position. Visual inspection can also verify whether or not locks and other protective devices have been applied to the control points in a manner that would present the unsafe movement of the switches or valves. Finally, a

visual inspection can be used to verify that isolation has taken place by determining that all motion has stopped and that all coasting parts such as flywheels, grinding wheels, saw blades, etc., have come to rest.

OSHA emphasizes that in order to verify that hazardous energy has been isolated, the authorized employee may need to use a combination of the above methods. The appropriate combination will depend upon the type of machinery or equipment involved, the complexity of the system, and other factors.

Paragraph (e) requires that certain actions be taken by authorized employees before lockout or tagout devices are removed from energy isolating devices. These actions are intended to ensure that: (1) The machine or equipment has been returned to an effective operating condition; (2) any employees who might be exposed to injury due to the process of restoring energy are made aware that such process is to begin; and (3) those employees having the responsibility for removal of the devices have been identified together with the specific conditions necessary for the procedures to take place.

One commenter (Ex. 2–70) contended that the requirements of paragraph (e) were unduly burdensome and impractical in large plants where numerous employees may be working. OSHA does not believe that this is the case. When servicing or maintenance is done on a large machine or complex system of equipment by a large number of employees, the machine or equipment would probably be operationally intact before the work begins. When the work is completed, paragraph (e)(1) merely requires that before the equipment is reenergized, the employees who did the servicing or maintenance work complete the job by replacing guards and other machinery components and cleaning up after themselves. Paragraph (e)(2) then requires a check for safe location of employees and notification that the equipment is to be reenergized. A simple procedure to follow to verify that the work area and the machinery is ready to be used for its production function is for a foreman, supervisor or leadman (whoever is in charge) to ask the workmen if they are done and then to spot check to ensure that all appears ready to resume normal operations.

Because each servicing employee will have his/her own lockout or tagout device attached to the energy isolating device during the servicing operation, the person in charge of the servicing operation will first determine whether all such devices have been removed by the servicing employees. This is an essential step in the procedure, and paragraph (e) requires that a final verification be performed to ensure that it is safe to reenergize the equipment after servicing is completed. Further, a check on the satisfactory completion of the work can also ensure that the machine or equipment will not be damaged by its start up. Although the purpose of the final check is to protect employees, it can also prevent needless downtime of the machine or equipment because the servicing or maintenance was not done correctly and/or completely the first time.

Paragraph (e)(1) requires that the workplace area around the machine or equipment be inspected to ensure that nonessential items have been removed and that equipment components are operationally intact. This step ensures that tools, machine parts and materials have been removed, and that mechanical restraints, guards and other machine parts have been replaced before returning the machine or equipment to its operational mode. Depending on the complexity of the machinery and the type and degree of servicing performed, visual inspection alone might be sufficient to meet this requirement, or there might have to be additional measures such as check lists and other administrative procedures.

One commenter (Ex. 2–28) suggested the elimination of the words "nonessential items" from this requirement and to substitute words which indicate that the only things that must be removed are those machines which could cause injury to employees or damage to items. OSHA believes that the cleanup requirement must of necessity be a broad one, since virtually any extraneous item in the servicing area could cause injury to employees if the machinery or equipment were to be reenergized before such items are removed. Further, OSHA believes that the cleanup process should not involve an evaluation of whether each item in the area could or could not cause injury. If an item does not have to be in the servicing area after the servicing is completed, OSHA believes that the prudent step is to assure that it is removed before the equipment is reenergized. Accordingly, paragraph (e)(1) is not being changed from the proposal.

In paragraph (e)(2), OSHA proposed that the work area be checked to be sure that employees are clear of the machine or equipment before energy is restored to it. This determination will usually include a visual inspection, and depending on the scope of the operation and the equipment involved, may involve the use of administrative procedures and warning devices such as horns, bells or buzzers.

There was one commenter (Ex. 2–28) who discussed this requirement. This commenter suggested that the terms "work area" and "all employees" were vague and misleading. OSHA believes that the "work area" for servicing will depend upon many factors, such as the type of equipment being serviced, the type of energy involved, and the extent of the servicing operation. OSHA's intent is that the work area include any area in the immediate vicinity of the machine or equipment being serviced, in which employees might be endangered by the startup process. Because of the broad scope of this standard, it is not possible to define with greater specificity what this area will encompass for any given workplace or servicing operation. The employer is in the best position to evaluate the equipment in the workplace, and to make a determination of areas where employees may be exposed to the hazards of the machinery or equipment.

It cannot be overemphasized that employees performing tasks on deenergized equipment may be exposed to hazards involving serious injury or death if the status of the lockout or tagout control can be changed without their knowledge. For this reason, OSHA requires in paragraph (e)(3) that lockout or tagout devices be removed by the employees who applied them. The proposal considered whether an exception should be provided for two types of situations in which the device may be removed under the direction of an authorized employee using specific procedures. Paragraph (e)(3)(i), as proposed, would have permitted other authorized employees to remove a lockout or tagout device when the employee who applied the lockout or tagout device is not available to remove it. This provision was intended to cover situations such as those that might arise from the sudden sickness or injury of an employee, key loss, or other emergency conditions. Proposed paragraph (e)(3)(ii) would have permitted use of the exception for unique operating activities involving complex systems, where the employer could demonstrate that it was not feasible to have the device removed by the employee applying it. This was intended to provide flexibility in operations similar to that where the removal of a lockout or tagout device at a remote electrical transmission or distribution system location was required and the process was controlled by a written procedure that uses an authorized employee operating from a central control point to communicate

instructions to employees working in the field.

There were 9 commenters (Ex. 2–29, 2–32, 2–44, 2–50, 2–57, 2–58, 2–59, 2–63 and 2–70) who discussed allowing exceptions to the rule requiring that lockout devices have to be removed by the employees who applied the devices. Two commenters (Ex. 2–29 and 2–44) stated that the exceptions as written were too broadly drawn and would nullify the standard. Several commenters (Ex. 2–32, 2–57 and 2–63) claimed that allowing any exceptions would be unsafe. In contrast, there were four commenters (Ex. 2–50, 2–58, 2–59 and 2–70) who suggested that the exception should be more flexible so that the employer has more leeway, such as allowing the existence of either, rather than both, of the two conditions spelled out in proposed paragraphs (e)(3)(i) and (e)(3)(ii) to trigger the exception.

In paragraph (e)(3) of this Final Rule, OSHA is requiring that as a general rule, the authorized employee who affixes a lockout or tagout device is the only one allowed to remove it. OSHA believes that each such employee must have the assurance that the device is in his/her control, and that it will not be removed by anyone else except in an emergency situation. The entire energy control program in this standard depends upon each employee recognizing and respecting another employee's lockout or tagout device. The servicing employee relies upon the fact that he/she applied the device, and assumes that it will remain on the equipment while he/she is exposed to the hazards of the servicing operation.

OSHA can envision very few instances which would justify one employee's removal of another's lockout or tagout device. However, in a true emergency, and not merely because the employee is not available, the employer may be able to demonstrate a need to remove an employee's lockout or tagout device. An exception to paragraph (e)(3) of the final rule is being provided to allow for such situations, and is discussed further below. OSHA emphasizes that removal of a personal lockout or tagout device by another person may not be based on convenience or simple unavailability of the employee. If a lockout or tagout device is attached, it is assumed that the employee who attached that device is engaged in servicing the equipment to which the device is attached, and that person is exposed to the hazards of reenergization. Therefore, as a general matter, the protection of that employee requires that he/she have complete control over his/her lockout or tagout device. Some modification of the general rule is warranted in the case of transfer of authority between shifts, as discussed in paragraph (f)(4) below, and to a limited extent in group lockout or tagout, as discussed in paragraph (f)(3) below, both of which involve coordination of activities between servicing employees.

Under the exception to paragraph (e)(3), the employer may direct the removal of a lockout or tagout device by another employee only if the energy control program incorporates specific procedures and training for that purpose, and only where the employer can demonstrate that the alternative procedure will provide equivalent safety to having the employee remove his/her own device. The procedure must include, at a minimum, the following items: First, verification that the authorized employee is not at the facility; second, making all reasonable efforts to contact that employee to inform him/her that his/her device has been removed; and third, ensuring that employee knows of that device removal before he/she resumes work at the facility. These steps are necessary to ensure that the employee who is protected by the device is not exposed to energy hazards either at the time of its removal or afterwards.

Paragraph (f)(1) requires that the employer develop and utilize a procedure that establishes a sequence of actions to be taken in situations where energy isolating devices are locked out or tagged out and there is a need for testing or positioning of the machine or equipment or components thereof. These actions are required in order to maintain the integrity of any lockout or tagout protection for the servicing employees. It is also necessary in order to provide optimum safety coverage for employees when they have to go from a deenergized condition to an energized one and then return the system to lockout or tagout control. It is during these transition periods that employee exposure to hazards is high, and a sequence of steps to accomplish these tasks safely is needed.

Paragraph (f)(1) prescribes a logical sequence of steps to be followed in situation where energy isolating devices are locked out or tagged out, and when there is a need to test or position the machine, equipment or components thereof. The steps offer necessary protection to employees when they are involved in this activity. The procedure is clear-cut and should require little or no explanation other than the contents of the standard itself.

It should be pointed out that OSHA is allowing the removal of the lockout or tagout devices and the reenergization of the machine or equipment only during the limited time necessary for the testing or positioning of the machine, equipment or component thereof. This paragraph does not allow the employer or employee to disregard the requirement for locking out or tagging out during the other portions of the servicing or maintenance operation. This exception is only a temporary measure to be used only to accomplish a particular task for which energization is essential.

In paragraphs (f)(2) (i) and (ii), the final standard requires that whenever outside servicing personnel are engaged to perform any of the activities covered by this standard at a plant or facility, the employer at that facility must inform the authorized representatives of the servicing organizations (contractors, service representatives, etc.) of the lockout or tagout procedures used by the facility. The standard also requires the plant or facility employer to verify that the procedures to be used by outside service representatives are at least as protective of his/her employees as the procedures used in the plant or facility, and that the employees in the plant or facility understand the restrictions or prohibitions of the contractor's procedure and the energy control program of the outside servicing organizations.

These requirements are necessary when outside personnel work on machines or equipment because their activities have the same or greater potential for exposing employees to servicing hazards as would exist if the employer's own employees were performing the work. These hazards can pose a threat to both the outside service representatives and the employees in the plant or facility.

The outside servicing personnel would certainly be expected to know about the specific equipment being serviced, but they might not be familiar with the energy control procedures being used in the particular workplace. Similarly, the employees at the worksite might be familiar with the procedures being used by their own employer, but they might not know what to do if the contractor has a procedure which differs from their own. If such procedures were not coordinated, each group of employees might be endangered by the actions of the other, even if each one followed its own procedures.

This standard is intended to ensure that both the employer and the outside service personnel are aware that their interaction can be a possible source of

injury to employees and that the close coordination of their activities is needed in order to reduce the likelihood of such injury. OSHA sees the proper utilization of these provisions, when they are understood and agreed upon, as a way to prevent misunderstandings by either plant employees or outside service personnel regarding the use of lockout or tagout procedures in general, and with regard to the use of specific lockout or tagout devices that are selected for a particular application.

There were several commenters (Ex. 2–3, 2–41, 2–58 and 2–67) who suggested OSHA require outside contractors to use the same procedures as used in the plant or facility that the work is being done. OSHA believes that it might adversely affect the safety of employees if the standard were to require them to comply with a procedure which is unfamiliar to them and differs from their usual practices under their own employer's energy control program. Further, by allowing each employee to use the procedure that he/she is familiar with, there is greater assurance that the employees will willingly use the procedure.

When different procedures are being used by the contractor and the facility employer, the standard requires each employer to determine the impacts of the other employer's procedure on his/her own employees, and to assure that those employees are protected as effectively under the other procedure as they would be under their own procedure. For example, if there are elements of the contractor's procedure which need to be explained to the facility employees, or if there are other steps needed to assure their safety under that procedure, the facility employer must provide these employees with adequate support and information to provide the necessary protection.

Several commenters (Ex. 2–35, 2–39, 2–40, and 2–69) recommended specifying that the plant or facility employer require compatibility of procedures. Because of the wide range of potential programs and procedures to be developed under this standard, OSHA considers that a requirement for full compatibility of procedures would be difficult, if not impossible, to implement with any degree of consistency. However, OSHA believes that if each employer provides the necessary information on his/her energy control procedure to the other employer whose employees are affected by that procedure, both employers will be able to evaluate the different procedures and determine what information needs to be provided to their respective employees. Accordingly, paragraph (f)(3) of the Final Rule requires that the plant or facility manager inform the outside contractor about the lockout or tagout procedures used in the facility; that the plant or facility employer assure that the contractor's procedure provide equivalent protection to the plant employees; and that the employees in the facility understand and comply with the instruction and prohibition of the procedures.

The requirement for coordination between the contractor and the on-site employer is intended to deal with the potential for either one's employees to create or compound the hazards to which the other's employees are exposed. Regardless of the degree of coordination required by paragraph (f)(2), each covered employer, whether contractor or on-site employer, has an independent obligation under the OSHA Act to provide the protection under the standard for his/her own employees.

The facility owner must look at various aspects of the contractor's energy control program to assure that his/her employees are not placed at an increased risk. For example, is the contractor's means of notifying the affected employees of the pending lockout or tagout as thorough as the facility employer's? Is the procedure for identifying the energy isolating devices as exhaustive or complete as the facility employer's? Is the method of lockout or tagout used by the contractor recognized and respected by the facility's employees? Does the contractor's procedure take into account the possibility of reaccumulation of stored energy (if that is a potential problem)? Does the contractor's procedure for removal of lockout or tagout devices and reenergization and startup of the machine or equipment provide for employee notification and ensuring the equipment is safe before startup? If any of the steps in the contractor's procedures fail to cover significant or essential conditions of the workplace which could adversely affect the safety of the facility employees, action must be taken by the facility employer to minimize the potential for injury to his/her employees.

Proposed paragraph (f)(3) contained a series of provisions dealing with group lockout. In brief, group lockout involves the performance of servicing or maintenance activities when more than one employee is engaged in the servicing operation, using a group lockout device, with an authorized employee directly responsible for the performance of the overall servicing. The proposed requirement for group lockout specified that the authorized employee would have a primary lock, which is affixed when the equipment is deenergized, and is removed when the job is completed. It did not provide for the use of individual locks or tags by the individual employees in the group. The proposal would have allowed this system, with the authorized employee being responsible for the safety of all the employees in the group, if that program provided the same degree of safety as personal lockout or tagout.

Based on the record (Ex. 2–27, 2–29, 2–32, 2–44, 2–63, 2–99, 2–106, 51, 56, 60, Tr. pg. W1–142), OSHA has reexamined the issue of group lockout and has concluded that an additional element is necessary for the safety of the servicing employees: each employee in the group needs to be able to affix his/her personal lockout or tagout system device as part of the group lockout. This is necessary for several reasons: first, the placement of a personnal lockout or tagout system device enable that employee to have a degree of control over his/her own protection, rather than having to depend completely upon other people; second, the use of a personal device will enable each servicing employee to verify that the equipment has been properly deenergized in accordance with the energy control procedure, and to affix his/her device to indicate that verification; third, the presence of an employee's lockout or tagout system device will inform all other persons, including the other servicing employees and supervisors, that the employee is still working on the equipment; fourth, as long as that device remains attached, the authorized person in charge of the group lockout or tagout knows that the job is not completed and that it is not safe to reenergize the equipment; and, fifth, the servicing employee will continue to be protected by the presence of his/her device until he/she removes it. The authorized employee in charge of the group lockout or tagout does not remove the group lockout device until each employee in the group has removed his/her personal device, indicating that employees are no longer exposed to the hazards from the servicing operation. OSHA is convinced that the use of individual lockout or tagout system devices to supplement the group lockout device is necessary for the safety of the servicing employees.

The proposed rule contained several general elements for group lockout, including provision on primary responsibility and coordination of work forces. These elements are carried forward in the Final Rule. The requirement for the use of personal

lockout or tagout devices will only enhance the overall effectiveness of these provisions, because the authorized employee in charge of the group lockout will be better able to evaluate the status of the servicing operation, as well as to determine which, if any, of the servicing employees are working on the equipment at a particular time.

OSHA requires in paragraph (f)(3) that when a crew, craft, department or other *group* lockout or tagout device is used, it must provide the authorized and affected employees with a degree of protection that is equivalent to the use of *personal* lockout or tagout procedures. As in the case of other forms of lockout or tagout protection, the employer who uses a group lockout or tagout system must develop a procedure which encompasses the elements set forth in paragraph (c)(4).

Paragraph (f)(3) identifies requires several key provisions which must be included in all group lockout or tagout procedures. If a single lockout device or set of lockout devices (often referred to as "operations locks") are utilized to isolate the machine or equipment from the energy sources, each authorized employee is afforded a means to utilize his/her personal lockout or tagout devices so that no single employee has control of the means to remove the group lockout or tagout devices while employees are still servicing or maintaining the machine or equipment. This can be accomplished by the use of a lockout or other similar appliance. Once the machine or equipment is locked out, the key is placed into the lockbox and each authorized employee places his/her lockout or tagout device on the box. When each individual completes his/her portion of the work, that person removes his/her lockout or tagout device from the lockbox. Once all personal lockout or tagout devices have been removed, the key for the group lockout devices for the machine or equipment can be used to remove that group lockout device. This method provides protection for all employees working under the protection of a particular group lockout or tagout device. When more than one group is involved, another authorized person might need to maintain responsibility for coordination of the various lockout control groups in order to ensure continuity of protection and to coordinate workforces.

In addition to designating and assigning responsibility to authorized employees, paragraph (f)(3) requires the employer to develop and implement procedures for determining the exposure status of individual crew members and for taking appropriate measures to control or limit that exposure.

These provisions are seen by OSHA as requiring at least the following steps:

1. Verification of shutdown and isolation of the equipment or process before allowing a crew member to place a personal lockout or tagout device on an energy isolating device, or on a lockout box, board, or cabinet;

2. Ensuring that all employees in the crew have completed their assignments, removed their lockout and/or tagout devices from the energy isolating device, the box lid or other device used, and are in the clear before turning the equipment or process over to the operating personnel or simply turning the machine or equipment on.

3. Providing the necessary coordinating procedures for ensuring the safe transfer of lockout or tagout control devices between other groups and work shifts.

The special coverage of paragraph (f)(3) recognizes the importance of group lockout and/or tagout devices used under conditions in which the safety of all employees working in the group is dependent on how those devices are used. For that reason, it involves a closer examination of the conditions, methods and procedures needed for effective employee protection.

OSHA also believes that by requiring each servicing employee to attach his/her own device in group servicing operations, it becomes possible to extend coverage of group servicing activities under paragraph (f)(3) beyond lockout, as envisioned by the proposal, to cover tagout, as well. This would primarily involve equipment which has not been designed to accept a lockout device. OSHA believes that when a group lockout or tagout procedure is properly implemented, it adds an additional element of protection to servicing employees: the authorized employee in charge of the group servicing operation applies a group lockout or tagout device to the equipment being serviced, and each servicing employee attaches a personal lockout or tagout device to the group device. These individual devices are removed by the employees who applied them, leaving the group device attached. These employees, by clearing the equipment and removing their own devices, indicate that they are no longer exposed to the hazards of the servicing operation. The authorized employee in charge of the group servicing operation then verifies that all elements of the group servicing have, in fact, been completed, and that it is safe to reenergize the system, before he/she removes the group device. Thus, the additional step provides further assurance that reenergizing the equipment will not endanger employees. Expanding group procedures to encompass tagout as well as lockout will extend the additional protection to operations which would otherwise be permitted under this standard to use tagout devices instead of lockout.

One of the most difficult problems to be dealt with by this standard involves the servicing and maintenance of complex equipment, particularly when the work extends across several workshifts. Under the basic approach taken by this standard, each servicing employee is responsible for the application and removal of his/her own lockout or tagout device. However, the record indicates that the servicing of some complex equipment may take days or weeks, and that in some cases, hundreds of lockout or tagout devices may be necessary. EEI (Ex. 56) noted that in some major maintenance operations, it can take a day or more just to apply lockout/tagout devices to all energy isolating devices. CMA (Ex. 56) explained that in a chemical plant, certain "turn-around" jobs may require the locking or tagging of a hundred or more energy isolation devices and require 25 or more employees to perform the servicing.

Paragraph (f)(4) of this Final Rule requires that specific procedures be utilized to ensure continuation of lockout or tagout protection for employees during shift or personnel changes in order to provide for an orderly transfer of control measures, and to be certain that the machine or equipment is continuously maintained in a safe condition. As with group lockout or tagout, this task is accomplished as part of the procedures that are defined in performance language in paragraph (c)(4). Paragraph (f)(4) requires specific procedures whenever transfer of control measures is necessary. The underlying rationale for these provisions, whereby hazardous energy control responsibility is transferred, is for the maintenance of uninterrupted protection for the employees involved. It is therefore considered essential that lockout or tagout devices be maintained on energy isolating devices throughout the transition period.

Basically, the transfer of responsibility can be accomplished by the on-coming shift employees accepting control of the system involved prior to the release of control by the off-going employees. Also, the procedures, whether they necessitate the use of simple control measures or the more

detailed use of logs and check lists to accomplish an orderly transfer, are to be followed by an assurance that the system is indeed safe for employees to continue working. This assurance involves action by the authorized or supervisory employee responsible for the transfer to verify the continued isolation of energy in the system.

There was considerable discussion at the hearings with regard to proposed paragraph (f)(4), concerning the need to ensure continued protection during shift or personnel changes. This paragraph was intended to provide protection for servicing operations which extend over more than one shift, usually involving from a few to large numbers of employees on each shift. OSHA attempted to provide a means of assuring that there is no gap in coverage between the off-going employee's removal of his/her lockout or tagout device and the on-coming employee's attachment of his/her own device. Several participants at the hearings testified as to methods used in their facilities to deal with this situation. EEI, for example, (Tr. pg. W2–22–2–26) testified that for complex jobs involving large numbers of energy control devices and many employees on different shifts, member companies use work permits which must be reauthorized at the beginning of each shift. The lockout/tagout devices which are attached to the energy control means at the start of the job are not removed between shifts. Before beginning work, the on-coming shift employees walk through the equipment and verify that the equipment has been deenergized and that proper procedures have been followed. Another system, involving an "operations lock," was endorsed by representatives of API (Ex. 57, Tr. pg. H 40) and OCAW (Tr. pg. H69–70). An "operations lock," essentially a type of group lockout device, is the first lock attached to the equipment when the equipment is deenergized, and it is the last lock removed when the job is completed. Each servicing employee attaches his/her personal lockout/tagout device while working on the equipment, and removes the device when the job is completed, or when leaving for the day. OSHA believes that when properly implemented, either of these methods can provide adequate assurance to the on-coming employee that the equipment is safe to work on.

Perhaps the most critical element of assuring continuity of protection is providing the individual employee with an opportunity to verify that the equipment has been deenergized. Even more than in the case with individual lockout or tagout, the on-coming employee should not have to depend on the actions of another employee or supervisor, particularly one who has left the workplace for the day, for assurance that it is safe to work on the machinery or equipment. The group lockout provisions in paragraph (f)(4) of the Final Rule contain what OSHA believes to be the necessary safeguards for these situations. To the extent that the procedures described by EEI, API, and OCAW provide for individual verification that the equipment has been properly deenergized, and to the extent that the procedures allow for the servicing employee to attest to that verification in accordance with the standard, OSHA believes that such procedures would comply wth the Final Rule. In the case of the type of complex servicing operation described by EEI, involving large numbers of energy isolation devices, large numbers of servicing employees, and multiple shifts, OSHA acknowledges that the removal and replacement of the lockout/tagout devices each shift could be overly burdensome. In these situations, the use of the work permit, with each employee signing on and off the equipment, combined with the employees walking down the equipment to ensure continued deenergization prior to beginning work, would be an acceptable approach to compliance with group lockout/tagout and shift transfer provisions of the standard.

Because the person applying the lockout or tagout device is generally the one being protected by that device, it is essential that the device not be removed by anyone else except in emergencies. When an employee transfers servicing duties to an employee on the next shift, and the equipment is to remain deenergized throughout the shift change, it should not be an undue burden to establish a procedure under paragraph (f)(4) for the off-going employee to transfer his/her authority to the on-coming employee. In situations where the off-going employee removes his/her lockout or tagout device before the on-coming employee arrives, the procedure could allow for the off-going employee to apply a tagout device at the time he/she removes his/her device, indicating that the lock had been removed, but that the machine or equipment had not been reenergized. The on-coming employee would verify that the system was still deenergized, and would remove the interim tag and substitute his/her lockout device. This would assure that the continuous protection is maintained from one shift to another. When tagout devices are used, it would be possible to use a tag with space for the off-going employee to sign off, giving the date and time, and for the on-coming employee to sign on, also giving the date and time. Each employee would verify the deenergization and energy isolation for his/her own protection before signing onto the tag.

VII. Regulatory Impact Analysis

Introduction

Executive Order 12291 (46 FR 13193, February 17, 1981) requires that a regulatory analysis be conducted for any rule potentially having major economic consequences on the national economy, geographical regions, individual industries, or levels of government. Consistent with these requirements, (OSHA) has prepared a Regulatory Impact Analysis (RIA) for this Final Rule. The analysis includes: A profile of the potentially affected firms and employees; a description of regulatory and nonregulatory alternatives; an analysis of the technological feasibility of the rule; and a study of the potential social benefits, economic costs, and environmental impacts that may result from full compliance with the rule.

The complete analysis, as summarized in this section, is based on data and information provided by the Eastern Research Group (ERG) in a study entitled, "Industry Profile Study of a Standard for Control of Hazardous Energy Sources Including Lockout/Tagout Procedures" [Ex. 15]. Additional information was obtained from comments submitted to OSHA in response to the proposed rule and a supplemental ERG report [Ex. 21].

The Secretary has determined that this action is a "major action" as defined by section 3(b) of Executive Order 12291 as it will have an annual effect on the economy of $100 million or more. The Regulatory Impact Analysis is available for inspection and copying in the rulemaking docket.

Affected Industries

The Final Rule will affect most employment covered by OSHA under Part 1910 except: (1) Those activities that are specifically excluded from coverage such as certain work on plug and cord type electrical equipment; and (2) employment for which OSHA has or is in the process of providing separate coverage under a different Subpart or Part, such as the oil and gas field services industry. OSHA has estimated that the rule will affect activities in some 1.7 million establishments

employing approximately 39 million workers.

To analyze the differing effects of the rule, OSHA has divided the affected industries into a high-impact group, a low-impact group, and a zero or negligible-impact group. The high-impact group consists of all manufacturing industries. In 1984, approximately 20 million workers were employed in 340,451 high-impact establishments.

Firms classified as low-impact include those in transportation; utilities; wholesale trade; retail food stores; and several service industries, including personal services, business services, automotive repair, miscellaneous repair, and amusement services. OSHA has estimated that approximately 19 million workers were employed in 1.4 million low-impact establishments in 1984.

The negligible-impact group consists of industries that ERG determined had little potential for a lockout or tagout-related accident. Retail trade, finance, insurance, real estate, service, and public administration firms not classified in the high or low-impact sectors were included in this group.

The Agency's analysis focuses on the potential regulatory effects to high- and low-impact firms.

Population at Risk

As noted, some 39 million workers are employed in industries that may be affected by the Final Rule. All such workers have the potential for being injured due to inadequate or non-existent use of lockout or tagout. In estimating the number of workers at risk from exposure to hazardous energy, OSHA classified "at-risk" occupations in the Final Rule as those being held by individuals who would actually perform lockout or tagout activities. Although this approach tends to underestimate the number of workers who could benefit from promulgation of a lockout or tagout rule, it does provide a good measure of the number of workers who will have to alter their work patterns to comply with the rule. Thus, it is an appropriate method for estimating the costs of the rule. Based on the ERG study [Ex. 15, p. 3–35], OSHA has determined that two million workers in high-impact industries, and one million workers in low-impact industries, are employed in occupations where the unexpected energization or start-up of machines or equipment or release of stored energy could cause injury to employees. The risk appears to be the greatest for those workers employed as craft workers, machine operators, and laborers. Certain types of machinery, such as packaging and wrapping equipment, along with printing presses and conveyors, are associated with a high proportion of the accidents.

Significance of Risk

The installation, assembly, service, repair, maintenance, change over, and disassembly of machines, equipment, and systems are activities integral to most industrial processes. During these activities, however, accidents often result from the inadvertent energization or movement of machinery or equipment.

The ERG study [Ex. 15, p. 6–27, 6–48] estimated that two percent of all workplace injuries, and 7.1 percent of all fatal occupational accidents, occur as a result of inadequate or nonexistent lockout or tagout procedures in industries regulated under this Final Rule. Based on these percentages, the Agency has estimated that in 1984 there were 144 fatalities, 33,432 lost workday injuries, and 37,561 non-lost workday injuries that occurred due to inadequate lockout or tagout procedures in the affected industries. Assuming that these types of accidents grow proportionately with the average level of employment, approximately 1,530 fatalities, 352,965 lost workday injuries, and 396,560 non-lost workday injuries would occur during the next 10 years in the absence of a lockout or tagout standard.

The accidents commonly resulting from inadequate or nonexistent lockout or tagout activities tend to be significantly more severe that the average occupational injury. Injuries typically include fractures, lacerations, contusions, amputations, and puncture wounds. The ERG study [Ex. 15, p. 6–52] estimated that such injuries cause workers to lose an average of 24 workdays. By way of comparison, the 1981 Bureau of Labor Statistics' Occupational Injuries and Illnesses Study [Ex. 18] reports that the average lost time occupational injury involves 16 lost workdays.

Based upon the aforementioned evidence, OSHA has determined that the failure to control hazardous energy results in a significant risk to employees. Since the private market fails to provide an adequate level of safety for workers servicing and maintaining equipment, the Agency has examined various regulatory and nonregulatory alternatives, including tort litigation, distribution of information, workers' compensation, and industry self-regulation. The Agency has concluded that the standard would reduce risk in an optimal manner.

Technological Feasibility

The Final Rule is written in performance-based language that permits firms to develop lockout or tagout procedures that are most appropriate for their specific machines and equipment. Based on data gathered during ERG site visits, OSHA has determined that some firms of all sizes and types are already in full compliance with the Final Rule. As this rule would not require the development of new technologies or significant equipment modifications, OSHA has determined that all provisions of the standard are technologically feasible.

Costs of Compliance with the Rule

OSHA has estimated the cost of full compliance with the standard based on the most cost-effective methods of implementing the Final Rule. The Agency estimates that 72.5 percent of all energy isolating devices are lockable (90 percent of the electrical disconnects and 66.7 percent of the valves) and will be locked out under the Final Rule, while the remaining 27.5 percent are not lockable and will be tagged out. Thus, the Agency has concluded that promulgation of the rule will cost 631,000 establishments a total of $214.3 million during the first year of implementation and $135.4 million in subsequent years.

The costs of complying with the standard can be briefly summarized by category. For locks, tags, and other hardware, the first-year cost is estimated to be $18.5 million, and the annual recurring costs amount to $8.9 million. For voluntary equipment modification to facilitate lockout or tagout, the first-year cost is estimated at $27.0 million, with no annual recurring costs. In terms of work practice modifications, the first-year cost and the annual recurring costs are $102.7 million each. For planning and implementing lockout or tagout procedures, the first-year cost is calculated at $35.2 million, and the annual recurring costs are estimated at $21.0 million. For employee training, the first-year cost is $31.0 million, and the annual recurring costs are $3.6 million.

OSHA also has estimated the average costs per establishment for firms not currently using adequate lockout or tagout procedures. First-year compliance costs for establishments in manufacturing industries, which are classified as high-impact firms, would range from $120 per firm for very small establishments (those having less than 20 employees) to $28,172 for large establishments (those having more than 250 employees). Industries categorized as low-impact would incur first-year costs of approximately $169 per firm. First-year costs of the standard by SIC code for the high and low-impact

industries are summarized in Table XXIV.

TABLE XXIV.—FIRST YEAR COST OF THE STANDARD FOR THE CONTROL OF HAZARDOUS ENERGY SOURCES BY SIC

[millions $]

SIC code	Industry name	Cost
	High impact industries	
20	Food and kindred products	10.8
21	Tobacco manufacturers	0.5
22	Textile mill products	7.2
23	Apparel and other finished products	2.0
24	Lumber and wood products, except furniture	3.6
25	Furniture and fixtures	2.4
26	Paper and allied products	5.9
27	Printing, publishing, and allied industries	14.1
28	Chemicals and allied products	8.2
29	Petroleum, refining, and related industries	1.4
30	Rubber and miscellaneous plastics products	6.0
31	Leather and leather products	1.1
32	Stone, clay, glass, and concrete products	4.1
33	Primary metal industries	10.1
34	Fabricated metal products, except machinery and transportation equipment	13.3
35	Machinery, except electrical	18.1
36	Electrical and electronic machinery, equipment, and supplies	13.3
37	Transportation equipment	14.9
38	Measuring, analyzing, and controlling instruments	2.9
39	Miscellaneous manufacturing industries	2.3
	Low impact industries	
Div. E..	Transportation	9.5
Div. E..	Communications	23.7
Div. E..	Utilities	4.4
Div. F..	Wholesale trade	13.7
Div. G..	Retail trade	1.2
Div. I....	Services	19.0
Total cost to high and low impact industries.		*214.3

*Total may not add due to rounding.
Source, OSHA, ORA, April, 1989.

Benefits of the Final Rule

OSHA has estimated the total number of accidents that the Final Rule would have prevented in 1984, assuming full compliance by all affected firms and workers. As as conservative estimate, the Agency assumed that only 85 percent of those accidents identified as caused by inadequate or nonexistent lockout or tagout procedures would actually be prevented under this rule. It was assumed that 15 percent of the noted accidents may still occur even if both employees and employers are complying fully with the rule (e.g., a block used to hold the weight of a suspended machine component may fail). Based on the above assumptions, OSHA has estimated that the Final Rule would have prevented approximately 122 fatalities, 28,416 lost workday injuries, and 31,926 non lost workday injuries in 1984.

Cost-Effectiveness

OSHA has calculated the cost per fatality avoided by the standard as one measure of its efficacy. Overall, for both low-impact and high-impact industries, the compliance costs of the standard are estimated to amount to about $1.2 million per fatality avoided. If compliance costs are further adjusted to reflect the additional economic benefits expected to accrue to employers (e.g., less lost production time, less administrative preparing insurance claims and accident reports, and less inefficiency related to replacing injured workers), the cost per fatality avoided falls to $0.19 million. However, this calculation only includes fatalities, and does not take into account the costs or benefits for the avoidance of employee injuries. If injuries were included in the calculations, cost per injury prevented would be extremely low. Thus, the Agency has concluded that the lockout or tagout rule will reduce the number of occupational fatalities and injuries in a cost-effective manner.

Economic Effects

OSHA has determined that full compliance with the standard will have a minor negative impact on the profits of the affected firms because, on average, compliance costs will equal no more than 0.05 percent of operating costs and 2.2 percent of net income for any size establishment. Neither the gross national product (GNP), the level of international trade, the price of consumer goods, nor the level of employment will be significantly affected. Based on these estimates, the Agency has concluded that the economic effects of the rule will be negligible, and thus neither the stability nor the profitability of any particular industry or size firm will be at issue as a consequence of the promulgation of the final standard.

VIII. Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 et seq.), OSHA must assess the potential economic impact of its standards to determine whether they will impose significant costs upon a substantial number of small entities. "Significance" is determined by the impact upon small firms' profits, market share, and financial viability. In particular, OSHA must determine whether its rules will have a relatively greater negative effect on small entities than on large entities.

To assess the impact of this rule on small entities, the Agency has estimated the total cost of compliance per establishment for firms not currently practicing lockout or tagout. First-year costs would range from $120 for very small firms (those having fewer than 20 employees; to $1,737 for small firms (those having 20 to 99 employees) to $28,172 for large firms (those having 250 employees or more) [Ex. No. 17, p. VI–43]. The cost of compiling with the Final Rule will depend primarily on the number of workers employed by a firm and the number of maintenance and servicing tasks required annually—factors that typically depend upon the scale of operation of a company. Thus, based on the above estimates, the costs of the Final Rule will be proportional to the size of the firm and no significant differential impact is expected.

OSHA also has compared the costs of compliance with small entities' total costs of production. The Agency has determined that the cost of full compliance with the rule will equal no more than 0.05 percent of an average small or very small firm's operating costs, and no more than 2.2 percent of an average small firm's net income [Ex. 17, p. VII–6].

As the costs of compliance for small and very small firms are proportional to the size of the firm, and would represent such a small component of the overall cost of the facilities, OSHA certifies that the Final Rule will not have a significant impact upon a substantial number of small entities. The Regulatory Flexibility Assessment of this rule is available for inspection and copying in the rulemaking docket.

IX. Environmental Assessment

This Final Rule has been reviewed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.), the Guidelines of the Council on Environmental Quality (CEQ) (40 CFR part 1500), and Department of Labor NEPA Procedures (29 CFR part 11). As a result of this review, the Acting Assistant Secretary for OSHA has determined that the rule will have no significant environmental impact.

The Final Rule focuses on the reduction of accidents and injuries by means of the utilization of specific work practices, procedures, and training. This proposal would not have an impact on air, water, or soil quality, plant or animal life, the use of land, or any other aspects of the environment. As such,

this proposal can therefore be categorized as an excluded action according to subpart B, § 11.10, of the DOL NEPA regulations.

X. Paperwork Reduction Act

This section contains a collection of information requirements in paragraphs § 1910.147(c)(4), (c)(7) and (f)(2) which pertain to the development and utilization of a written energy control procedure and the training of employees in that procedure. The paperwork requirements contained in this rule will be submitted to the Office of Management and Budget (OMB) for approval.

XI. International Trade

Increases in the price of domestically manufactured goods in general result in an increase in the demand for imports, and a decrease in the demand for exports. The magnitude of this impact depends on the relevant demand elasticities and the magnitude of the price changes. While the final standard may result in slightly higher prices of manufactured goods, the estimated magnitude of this increase is so small that the Agency has concluded that any resultant impact on foreign trade will be negligible.

XII. Federalism

This Final Rule has been reviewed in accordance with Executive Order 12612 (52 FR 41685, October 30, 1987), regarding Federalism. This Order requires that agencies, to the extent possible, refrain from limiting State policy options, consult with States prior to taking any actions which would restrict State policy options, and take such actions only when there is clear constitutional authority and the presence of a problem of national scope. The Order provides for preemption of State law only if there is a clear Congressional intent for the Agency to do so. Any such preemption is to be limited to the extent possible.

Section 18 of the Occupational Safety and Health Act (OSH Act) expresses Congress' clear intent to preempt State laws relating to issues on which Federal OSHA has promulgated occupational safety and health standards. Under the OSH Act, a State can avoid preemption only if it submits, and obtains Federal approval of, a plan for the development of such standards and their enforcement. Occupational safety and health standards developed by such Plan-States must, among other things, be at least as effective in providing safe and healthful employment and places of employment as the Federal standards. Where such standards are applicable to products distributed or used in interstate commerce, they may not unduly burden commerce and must be justified by compelling local conditions (*see* section 18(c)(2) of the OSH Act).

The Federal standard on control of hazardous energy sources addresses hazards which are not unique to any one State or region of the country. Nonetheless, States with occupational safety and health plans approved under Section 18 of the OSH Act will be able to develop their own State standards to deal with any special problems which might be encountered in a particular State. Moreover, because this standard is written in general, performance-oriented terms, there is considerable flexibility for State plans to require, and for affected employers to use, methods of compliance which are appropriate to the working conditions covered by the standard.

In brief, this Final Rule addresses a clear national problem related to occupational safety and health in general industry. Those States which have elected to participate under Section 18 of the OSH Act are not preempted by this standard, and will be able to deal with any special conditions within the framework of the Federal Act, while ensuring that the State standards are at least as effective as that standard.

XIII. State Plan Standards

The 25 States and territories with their own OSHA-approved occupational safety and health plans must adopt a comparable standard within six months of the publication date of the final standard. These States and territories are: Alaska, Arizona, California, Connecticut (for State and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (for state and local government employees only), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. Until such time as a State standard is promulgated, Federal OSHA will provide interim enforcement assistance, as appropriate, in these States.

XIV. Effective Date

In developing the Final Rule, OSHA has considered whether a delayed effective date is necessary for any of the provisions of the standard. Since the Final Rule does not require extensive retrofitting or major modifications of existing equipment, the Agency believes that 60 days is adequate time for employers to obtain the necessary hardware (primarily lockout and tagout devices). This amount of time should also be adequate for the development of the energy control program and procedures required by the standard. The record indicates that many industries with highly complex equipment, such as the automotive, chemical, and petroleum industries, have already implemented lockout or tagout procedures which would need to be modified little, if at all, to meet the standard. For those employers who will need to develop new procedures to comply with the standard, the standard provides considerable guidance to assist in that development process. Appendix A to the Final Rule sets forth an example of a simple procedure which can be tailored to the individual workplace in situations involving a single energy source. OSHA believes that many employers, particularly small businesses, will be able to use this procedure by filling in the blanks with the necessary information. For more complex situations, a more complex procedure may be necessary. During this rulemaking, interested parties submitted a wide range of procedures and information on their implementation to the rulemaking record, and these materials are available for review and copying in OSHA's Docket Office.

XV. List of Subjects in 29 CFR Part 1910 1910

Lockout; Tagout; Control of hazardous energy sources; Deenergize; Training; Occupational safety and health; Occupational Safety and Health Administration; Safety.

XVI. Authority

This document was prepared under the direction of Alan C. McMillan, Acting Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor 200 Constitution Ave., NW., Washington, DC 20210.

Accordingly, pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), Secretary of Labor's Order No. 9–83 (48 FR 35736), and 29 CFR part 1911, 29 part 1910 is hereby amended as set forth below.

Signed at Washington, D.C., this 28th day of August 1989.

Alan C. McMillan,

Acting Assistant Secretary of Labor.

29 CFR Part 1910 is amended as follows:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

1. The authority citation for Subpart J of Part 1910 is revised to read as follows:

Authority: Section 4, 6 and 8, Occupational Safety and Health Act of 1970, 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 12–71 (36 FR 8754) 8–76 (41 FR 25059) or 9–83 (48 FR 35736), as applicable. Sections 1910.141, 1910.142 and 1910.147 also issued under 29 CFR part 1911.

§ 1910.150 [Redesignated From 1910.147]

2. Section 1910.147 is redesignated as § 1910.150.

3. A new § 1910.147 and Appendix to § 1910.147 are added to read as follows:

§ 1910.147 The control of hazardous energy (lockout/tagout).

(a) *Scope, application and purpose*—(1) *Scope.*

(i) This standard covers the servicing and maintenance of machines and equipment in which the *unexpected* energization or start up of the machines or equipment, or release of stored energy could cause injury to employees. This standard establishes minimum performance requirements for the control of such hazardous energy.

(ii) This standard does not cover the following:

(A) Construction, agriculture and maritime employment;

(B) Installations under the exclusive control of electric utilities for the purpose of power generation, transmission and distribution, including related equipment for communication or metering; and

(C) Exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization installations, which is covered by Subpart S of this part; and

(D) Oil and gas well drilling and servicing.

(2) *Application.* (i) This standard applies to the control of energy during servicing and/or maintenance of machines and equipment.

(ii) Normal production operations are not covered by this standard (See Subpart O of this Part). Servicing and/or maintenance which takes place during normal production operations is covered by this standard only if;:

(A) An employee is required to remove or bypass a guard or other safety device; or

(B) An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle.

Note: *Exception to paragraph (a)(2)(ii):* Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection (See Subpart O of this Part).

(iii) This standard does not apply to the following.

(A) Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.

(B) Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that the employer demonstrates that (*1*) continuity of service is essential; (*2*) shutdown of the system is impractical; and (*3*) documented procedures are followed, and special equipment is used which will provide proven effective protection for employees.

(3) *Purpose.* (i) This section requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy in order to prevent injury to employees.

(ii) When other standards in this part require the use of lockout or tagout, they shall be used and supplemented by the procedural and training requirements of this section.

(b) *Definitions applicable to this section.*

Affected employee. An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized employee. A person who locks or implements a tagout system procdure on machines or equipment to perform the servicing or maintenance on that machine or equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment which must be locked or a tagout system implemented.

"Capable of being locked out." An energy isolating device will be considered to be capable of being locked out either if it is designed with a hasp or other attachment or integral part to which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. Other energy isolating devices will also be considered to be capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized. Connected to an energy source or containing residual or stored energy.

Energy isolating device. A mechanical device that physically prevents the transmission or release or energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conuctors and, in addition, no pole can be operated independently; a slide gate; a slip blind; a line valve; a block; and any similar device used to block or isolate energy. The term does not include a push button, selector switch, and other control circuit type devices.

Energy source. Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Hot tap. A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockout. The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device. A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

Normal production operations. The utilization of a machine or equipment to perform its intended production function.

Servicing and/or maintenance. Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the *unexpected* energization or startup of the equipment or release of hazardous energy.

Setting up. Any work performed to prepare a machine or equipment to perform its normal production operation.

Tagout. The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device. A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

(c) *General*—(1) *Energy control program.* The employer shall establish a program consisting of an energy control procedure and employee training to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated, and rendered inoperative, in accordance with paragraph (c)(4) of this section.

(2) *Lockout/tagout.* (i) If an energy isolating device is not capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize a tagout system.

(ii) If an energy isolating device is capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize lockout, unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection as set forth in paragraph (c)(3) of this section.

(iii) After October 31, 1989, whenever major replacement, repair, renovation or modification of machines or equipment is performed, and whenever new machines or equipment are installed, energy isolating devices for such machines or equipment shall be designed to accept a lockout device.

(3) *Full employee protection.* (i) When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.

(ii) In demonstrating that a level of safety is achieved in the tagout program which is equivalent to the level of safety obtained by using a lockout program, the employer shall demonstrate full compliance with all tagout-related provisions of this standard together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

(4) *Energy control procedure.* (i) Procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this section.

Note: *Exception:* The employer need not document the required procedure for a particular machine or equipment, when all of the following elements exist: (1) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees; (2) the machine or equipment has a single energy source which can be readily identified and isolated; (3) the isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment; (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance; (5) a single lockout device will achieve a locked-out condition; (6) the lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance.

(ii) The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following:

(A) A specific statement of the intended use of the procedure;

(B) Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;

(C) Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the responsibility for them; and

(D) Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

(5) *Protective materials and hardware.* (i) Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided by the employer for isolating, securing or blocking of machines or equipment from energy sources.

(ii) Lockout devices and tagout devices shall be singularly identified; shall be the only devices(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:

(A) *Durable.* (*1*) Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.

(*2*) Tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.

(*3*) Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.

(B) *Standardized.* Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: Color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.

(C) *Substantial*—(*1*) *Lockout devices.* Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

(*2*) *Tagout devices.* Tagout devices, including and their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

(D) *Identifiable.* Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s).

(iii) Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: *Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate.*

(6) *Periodic inspection.* (i) The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.

(A) The periodic inspection shall be perfomed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.

(B) The periodic inspection shall be designed to correct any deviations or inadequacies observed.

(C) Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.

(D) Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section.

(ii) The employer shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.

(7) *Training and communication.* (i) The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of energy controls are required by employees. The training shall include the following:

(A) Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.

(B) Each affected employee shall be instructed in the purpose and use of the energy control procedure.

(C) All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

(ii) When tagout systems are used, employees shall also be trained in the following limitations of tags:

(A) Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.

(B) When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.

(C) Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.

(D) Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.

(E) Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

(F) Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

(iii) Employee retraining.

(A) Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.

(B) Additional retraining shall also be conducted whenever a periodic inspection under paragraph (c)(6) of this section reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

(C) The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

(iv) The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

(8) *Energy isolation.* Implementation of lockout or the tagout system shall be performed only by authorized employees.

(9) *Notification of employees.* Affected employees shall be notified by the employer or authorized employee of the application and removal of lockout devices or tagout devices. Notification shall be given before the controls are applied, and after they are removed from the machine or equipment.

(d) *Application of control.* The established procedure for the application of energy control (implementation of lockout or tagout system procedures) shall cover the following elements and actions and shall be done in the following sequence:

(1) *Preparation for shutdown.* Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

(2) *Machine or equipment shutdown.* The machine or equipment shall be turned off or shut down using the procedures required by this standard. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of equipment deenergization.

(3) *Machine or equipment isolation.* All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

(4) *Lockout or tagout device application.* (i) Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.

(ii) Lockout devices, where used, shall be affixed in a manner to that will hold the energy isolating devices in a "safe" or "off" position.

(iii) Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

(A) Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.

(B) Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

(5) *Stored energy.* (i) Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

(ii) If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

(6) *Verification of isolation.* Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

(e) *Release from lockout or tagout.* Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:

(1) *The machine or equipment.* The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.

(2) *Employees.* (i) The work area shall be checked to ensure that all employees have been safely positioned or removed.

(ii) Before lockout or tagout devices are removed and before machines or equipment are energized, affected employees shall be notified that the lockout or tagout devices have been removed.

(3) *Lockout or tagout devices removal.* Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device. *Exception to paragraph (e)(3):* When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the employer, provided that specific procedures and training for such removal have been developed, documented and incorporated into the employer's energy control program. The employer shall demonstrate that the specific procedure provides equivalent safety to the removal of the device by the authorized employee who applied it. The specific procedure shall include at least the following elements:

(i) Verfication by the employer that the authorized employee who applied the device is not at the facility;

(ii) Making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed; and

(iii) Ensuring that the authorized employee has this knowledge before he/she resumes work at that facility.

(f) *Additional requirements.* (1) *Testing or positioning of machines, equipment or components thereof.* In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:

(i) Clear the machine or equipment of tools and materials in accordance with paragraph (e)(1) of this section;

(ii) Remove employees from the machine or equipment area in accordance with paragraph (e)(2) of this section;

(iii) Remove the lockout or tagout devices as specified in paragraph (e)(3) of this section;

(iv) Energize and proceed with testing or positioning;

(v) Deenergize all systems and reapply energy control measures in accordance with paragraph (d) of this section to continue the servicing and/or maintenance.

(2) *Outside personnel (contractors, etc.).* (i) Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this standard, the on-site employer and the outside employer shall inform each other of their respective lockout or tagout procedures.

(ii) The on-side employer shall ensure that his/her personnel understand and comply with restrictions and prohibitions of the outside employer's energy control procedures.

(3) *Group lockout or tagout.* (i) When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

(ii) Group lockout or tagout devices shall be used in accordance with the procedures required by paragraph (c)(4) of this section including, but not necessarily limited to, the following specific requirements:

(A) Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock);

(B) Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment and

(C) When more than one crew, craft, department, etc. is involved, assignment of overall job-associated lockout or tagout control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection; and

(D) Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

(4) *Shift or personnel changes.* Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout devices between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization, start-up of the machine or equipment, or release of stored energy.

Note: The following Appendix to § 1910.147 services as a non-mandatory guideline to assist employers and employees in complying with the requirements of this section, as well as to provide other helpful information. Nothing in the Appendix adds to or detracts from any of the requirements of this section.

BILLING CODE 4510-26-M

APPENDIX A -- TYPICAL MINIMAL LOCKOUT OR TAGOUT SYSTEM PROCEDURES

General

Lockout is the preferred method of isolating machines or equipment from energy sources. To assist employers in developing a procedure which meets the requirements of the standard, however, the following simple procedure is provided for use in both lockout or tagout programs. This procedure may be used when there are limited number or types of machines or equipment or there is a single power source. For more complex systems, a more comprehensive procedure will need to be developed, documented, and utilized.

Lockout (or Tagout) Procedure for (Name of Company).

Purpose

This procedure establishes the minimum requirements for the lockout or tagout of energy isolating devices. It shall be used to ensure that the machine or equipment are isolated from all potentially hazardous energy, and locked out or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, start-up or release of stored energy could cause injury (Type(s) and Magnitude(s) of Energy and Hazards).

Responsibility

Appropriate employees shall be instructed in the safety significance of the lockout (or tagout) procedure (Name(s)/Job Title(s) of employees authorized to lockout or tagout). Each new or transferred affected employee and other employees whose work operations are or may be in the area shall be instructed in the purpose and use of the lockout or tagout procedure (Name(s)/Job Title(s) of affected employees and how to notify).

Preparation for Lockout or Tagout

Make a survey to locate and identify all isolating devices to be certain which switch(s), valve(s) or other energy isolating devices apply to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved. (Type(s) and Location(s) of energy isolating means).

Sequence of Lockout or Tagout System Procedure

(1) Notify all affected employees that a lockout or tagout system is going to be utilized and the reason therefor. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.

(2) If the machine or equipment is operating, shut it

down by the normal stopping procedure (depress stop button, open toggle switch, etc.)

(3) Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. (Type(s) of Stored Energy-methods to dissipate or restrain).

(4) Lockout and/or tagout the energy isolating devices with assigned individual lock(s) or tag(s) (Method(s) Selected; i.e., locks tags, additional safety measures, etc.)

(5) After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate (Type(s) of Equipment checked to ensure disconnections).

CAUTION: Return operating control(s) to "neutral" or "off" position after the test.

(6) The equipment is now locked out or tagged out.

Restoring Machines or Equipment to Normal Production Operations

(1) After the servicing and/or maintenance is complete and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.

(2) After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

Procedure Involving More Than One Person

In the preceding steps, if more than one individual is required to lockout or tagout equipment, each shall place his/her own personal lockout device or tagout device on the energy isolating device(s). When an energy isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) may be used. If lockout is used, a single lock may be used to lockout the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use his/her own lock to secure the box or cabinet. As each person no longer needs to maintain his or her lockout protection, that person will remove his/her lock from the box or cabinet

(Name(s)/Job Title(s) of employees authorized for group lockout or tagout).

Basic Rules for Using Lockout or Tagout System Procedure

All equipment shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked or a tagged out.

LOCKOUT (OR TAGOUT) PROCEDURE

Entry No	(Description)
1.	Name of Company
2.	Type(s) and Magnitude(s) of energy and hazards
3.	Names(s)/Job Title(s) of employees authorized to lockout or tagout
4.	Names(s)/Job Title(s) of affected employees and how to notify
5.	Type(s) and Location of energy isolating means
6.	Type(s) of Stored Energy-methods to dissipate or restrain
7.	Method(s) Selected i.e., locks, tags, additional safety measures, etc.
8.	Type(s) of Equipment checked to ensure disconnections
9.	Name(s)/Job Title(s) of employees authorized for group lockout or tagout

federal register

Friday
September 1, 1989

Part V

Department of Health and Human Services

National Institutes of Health

Recombinant DNA; Advisory Committee Meeting and Proposed Actions Under Guidelines for Research

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Recombinant DNA Advisory Committee; Meeting

Pursuant to Public Law 92–463, notice is hereby given of a meeting of the Recombinant DNA Advisory Committee at the National Institutes of Health (NIH), Building 31C, Conference Room 6, 9000 Rockville Pike, Bethesda, Maryland 20892, on October 6, 1989, from approximately 9 a.m. to adjournment at approximately 5 p.m. This meeting will be open to the public to discuss:

Proposal that the Recombinant DNA Advisory Committee institute a study;

Proposed major actions;

Proposed revision of NIH Guidelines definition of recombinant DNA for the purposes of shipment;

Points to consider document on human gene transfer;

Amendment of NIH Guidelines; and

Other matters to be considered by the Committee.

Attendance by the public will be limited to space available. Members of the public wishing to speak at the meeting may be given such opportunity at the discretion of the Chair.

Dr. Nelson A. Wivel, Director, Office of Recombinant DNA Activities, National Institutes of Health, Building 31, Room 4B11, Bethesda, Maryland 20892, telephone (301) 496–9838, will provide materials to be discussed at the meeting, rosters of committee members, and substantive program information. A summary of the meeting will be available at a later date.

OMB's "Mandatory Information Requirements for Federal Assistance Program Announcements" (45 FR 39592) requires a statement concerning the official government programs contained in the *Catalog of Federal Domestic Assistance.* Normally NIH lists in its announcements the number and title of affected individual programs for the guidance of the public. Because the guidance in this notice covers not only virtually every NIH program but also essentially every Federal research program in which DNA recombinant molecule techniques could be used, it has been determined not to be cost effective or in the public interest to attempt to list these programs. Such a list would likely require several additional pages. In addition, NIH could not be certain that every Federal program would be included as many Federal agencies, as well as private organizations, both national and international, have elected to follow the NIH Guidelines. In lieu of the individual program listing, NIH invites readers to direct questions to the information address above about whether individual programs listed in the *Catalog of Federal Domestic Assistance* are affected.

Dated: August 28, 1989.

Betty J. Beveridge,

Committee Management Officer, NIH.

[FR Doc. 89–20661 Filed 8–31–89; 8:45 am]

BILLING CODE 4140–01–M

Recombinant DNA Research; Proposed Actions Under Guidelines

AGENCY: National Institutes of Health, PHS, DHHS.

ACTION: Notice of Proposed Actions Under the NIH Guidelines for Research Involving Recombinant DNA Molecules.

SUMMARY: This notice sets forth proposed actions to be taken under the National Institutes of Health (NIH) Guidelines for Research Involving Recombinant DNA Molecules. Interested parties are invited to submit comments concerning these proposals. These proposals will be considered by the Recombinant DNA Advisory Committee (RAC) at its meeting on October 6, 1989. After consideration of these proposals and comments by the RAC, the Acting Director of the National Institutes of Health will issue decisions in accordance with the NIH Guidelines.

DATES: Comments received by September 27, 1989, will be reproduced and distributed to the RAC for consideration at its October 6, 1989 meeting.

ADDRESS: Written comments and recommendations should be submitted to Dr. Nelson A. Wivel, Director, Office of Recombinant DNA Activities, Building 31, Room 4B11, National Institutes of Health, Bethesda, Maryland 20892 or send by telecopier to 301–496–9839. All comments received in timely response to this notice will be considered and will be available for public inspection in the above office on weekdays betwen the hours of 8:30 a.m. and 5:00 p.m.

FOR FURTHER INFORMATION CONTACT: Background documentation and additional information can be obtained from the Office of Recombinant DNA Activities, Building 31, Room 4B11, National Institutes of Health, Bethesda, Maryland 20892, (301) 496–9838.

SUPPLEMENTARY INFORMATION: The NIH will consider the following actions under the NIH Guidelines for Research Involving Recombinant DNA Molecules:

I. Amendment of Section I–B of the NIH Guidelines

At its meeting on January 30, 1989, the RAC discussed a proposal submitted by the National Wildlife Federation to amend section I–B, "Definition of Recombinant DNA Molecules," of the NIH Guidelines. There was general agreement that newer technologies are not covered under the current definition in the NIH Guidelines, which is based on early methods for cutting and joining pieces of DNA. The Committee requested that the Revision of the NIH Guidelines Subcommittee examine the current definition and revise it to encompass newer techniques, without greatly expanding the scope of the NIH Guidelines.

The Revision of the NIH Guidelines Subcommittee met on June 5, 1989, and considered this charge. The Subcommittee agreed that additional information regarding the potential effects of the new techniques was needed before the definition could be revised. Their conclusion was to recommend that:

RAC institute a study on the extent to which new techniques for introducing foreign DNA into living cells without the use of recombinant DNA methodology pose potential biohazards.

II. Points To Consider Document on Human Gene Transfer

On September 29, 1986, the RAC adopted the "Points to Consider in the Design and Submission of Human Somatic-Cell Gene Therapy Protocols," which was prepared by the Human Gene Therapy Subcommittee."

At the January 30, 1989, meeting, the RAC endorsed a proposal to form a subcommittee to update and report to the Human Gene Therapy Subcommittee recommendations to amend the "Points to Consider." The Points to Consider Subcommittee met on March 31, 1989, and developed a draft revision of the original document.

On July 31, 1989, the Human Gene Therapy Subcommittee met to consider this document. The title and scope of the 1986 document were revised to reflect the Subcommittee's experiences reviewing a proposal for human gene transfer. The results of their deliberations are as follows:

NATIONAL INSTITUTES OF HEALTH

Points to Consider in the Design and Submission of Protocols for the Transfer of Recombinant DNA into Human Subjects—

Human Gene Therapy Subcommittee—

NIH Recombinant DNA Advisory Committee

Outline

Applicability
Introduction

I. Description of Proposal.

A. Objectives and rationale of the proposed research
1. Use of recombinant DNA for therapeutic purposes
2. Transfer of recombinant DNA for other purposes
B. Research design, anticipated risks and benefits
1. Structure and characteristics of the biological system
2. Preclinical studies, including risk assessment studies
3. Clinical procedures, including patient monitoring
4. Public health considerations
5. Qualifications of investigators, adequacy of laboratory and clinical facilities
C. Selection of patients
D. Informed consent
E. Privacy and confidentiality

II. Special Issues.

A. Provision of information to the public
B. Communication of research methods and results to investigators and clinicians

III. Requested Documentation.

A. Original protocol
B. IRB and IBC minutes and recommendations
C. One-page abstract of gene transfer protocol
D. One-page description of proposed experiment in non-technical language
E. Curricula vitae for key professional personnel
F. Indication of other federal agencies to which the protocol is being submitted
G. Other pertinent material

IV. Reporting Requirements.

National Institutes of Health

Points to Consider in the Design and Submission of Protocols for the Transfer of Recombinant DNA into Human Subjects

Applicability

These "Points to Consider" apply to research conducted at or sponsored by an institution that receives any support for recombiant DNA research from the National Institutes of Health (NIH). Other researchers (e.g., those employed by private companies, non-United States organizations, and non-profit organizations) are encouraged to use the "Points to Consider." Experiments in which recombiant DNA is introduced into cells of a human subject with the intent of stably modifying the subject's genome are covered by Section III–A–4 of the NIH Guidelines for Research Involving Recombinant DNA Molecules (49 FR 46266). Section III–A–4 applies both to recombinant DNA and to DNA or RNA derived from recombinant DNA.

Introduction

(1) This document is intended to provide guidance in preparing proposals for NIH consideration under Section III–A–4 of the NIH Guidelines for Research Involving Recombinant DNA Molecules. Section III–A–4 requires experiments involving the transfer of recombinant DNA into human subjects to be reviewed by the NIH Recombinant DNA Advisory Committee (RAC) and approved by the NIH. RAC consideration of each proposal will be on a case-by-case basis and will follow publication of a precis of the proposal in the **Federal Register**, an opportunity for public comment, and a review of the proposal by the Human Gene Therapy Subcommittee (the Subcommittee) of the RAC. RAC recommendations on each proposal will be forwarded to the NIH Director for a decision which will then be published in the **Federal Register**.

(2) In general, it is expected that the transfer of recombinant DNA into human subjects will not present a risk to public health or to the environment as the recombinant DNA is expected to be confined to the human subject. Nevertheless, Section I–B–4–b of the "Points to Consider" document specifically asks the researchers to address this point.

(3) This document will be considered for revision as experience in evaluating proposals accumulates and as new scientific developments occur. This review will be carried out periodically as needed.

(4) A proposal will be considered by the RAC only after the protocol has been approved by the local Institutional Biosafety Committee (IBC) and by the local Institutional Review Board (IRB) in accordance with Department of Health and Human Service (DHHS) Regulations for the Protection of Human Subjects (45 Code of Federal Regulations, Part 46). (If a proposal involves children, special attention should be paid to subpart D of these DHHS regulations.) The IRB and IBC may, at their discretion, condition their approval on further specific deliberation by the RAC and its Subcommittee. Consideration of proposals by the RAC may proceed simultaneously with review by any other involved federal agencies [1] provided that the RAC is notified of the simultaneous review. Meetings of the Committee and the Subcommittee will be open to the public except where trade secrets or proprietary information would be disclosed. The committee prefers that the first proposals submitted for RCA review contain no proprietary information or trade secrets, enabling all aspects of the review to be open to the public. The public review of these protocols will serve to inform the public not only on the technical aspects of the proposals but also on the meaning and significance of the research.

(5) The clinical application of recombinant DNA techniques raises two general kinds of questions: (i) the questions usually discussed by IRBs in their review of any proposed research involving human subjects; and (ii) broader issues. The first type of question is addressed principally in Part I of this document. Several broader issues are discussed later in this Introduction and in Part II below.

(6) Following the Introduction, this document is divided into four parts. Part I requests a description of the protocol with special attention to the short-term risks and benefits of the proposed research to the patient [2] and to other people, the selection of patients, informed consent, and privacy and confidentiality. In Part II, investigators are requested to address special issues pertaining to the free flow of information about the clinical trials. These issues lie outside the usual puview of IRRBs and reflect general public concerns about biomedical research. Part III summarizes other requested documentation that will assist the RAC and its Subcommittee in their review of the proposals. Part IV specifies reporting requirements.

(7) The RAC and its Subcommittee will not at present entertain proposals for germ line alterations but will consider for approval protocols involving somatic cell gene therapy. The purpose of somatic cell gene therapy is to treat an individual patient, e.g., by inserting a properly functioning gene into a patient's somatic cells. In germ line alterations, a specific attempt is made to introduce genetic changes into the germ (reproductive) cells of an individual, with the aim of changing the set of genes passed on to the individual's offspring.

(8) The acceptability of human somatic cell gene therapy has been addressed in several public documents as well as in numerous academic studies. The November 1982 report of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, Splicing Life, resulted from a two-year process of public deliberations and hearings; upon release of that

report, a House subcommittee held three days of public hearings with witnesses from a wide range of fields from the biomedical and social sciences to theology, philosophy, and law. In December 1984, the Office of Technology Assessment released a background paper, Human Gene Therapy, which concluded:

"Civic, religious, scientific, and medical groups have all accepted, in principle, the appropriateness of gene therapy of somatic cells in humans for specific genetic diseases. Somatic cell gene therapy is seen as an extension of present methods of therapy that might be preferable to other technologies."

In light of this public support, the RAC is prepared to consider proposals for somatic cell gene therapy.

(9) In their evaluation of proposals involving the transfer of recombinant DNA into human subjects, the RAC and its Subcommittee will consider whether the design of such experiments offers adequate assurance that their consequences will not go beyond their purpose, which is the same as the traditional purpose of all clinical investigations, namely, to protect the health and well-being of the individual subjects being treated while at the same time gathering generalizable knowledge.

Two possible undesirable consequences of the transfer of recombinant DNA would be unintentional: (1) Vertical transmission of genetic changes from an individual to his or her offspring or (2) horizontal transmission of viral infection to other persons with whom the individual comes in contact. Accordingly, this document requests information that will enable the RAC and its Subcommittee to assess the possibility that the proposed experiments will inadvertently affect reproductive cells or lead to infection of other people (e.g., treatment personnel or relatives).

(10) In recognition of the social concern that surrounds the subject of gene transfer, the Subcommitte will cooperate with other groups in assessing the possible long-term consequences of the transfer of recombinant DNA into human subjects and related laboratory and minimal experiments in order to define appropriate human applications of this emerging technology.

(11) Responses to the questions raised in these "Points to Consider" should be provided in the form of either written answers or references to specific sections of the protocol or its appendices.

(12) Investigators should indicate points which are not applicable with a brief explanation. Investigators submitting proposals that employ essentially the same vector systems (or with minor variations), and/or that are based on the same preclinical testing as proposals previously reviewed by the Subcommittee and the Recombinant DNA Advisory Committee (RAC), may refer to proceeding documents without having to rewrite such material.

I. Description of Proposal—A. Objectives and rationale of the proposed research. State concisely the overall objectives and rationale of the proposed study. Please provide information on the specific points that relate to whichever type of research is being proposed:

1. Use of recombinant DNA for therapeutic purposes. For research in which recombinant DNA is transferred in order to treat a disease or disorder (e.g., genetic diseases, cancer, and metabolic diseases), the following questions should be addressed:

a. Why is the disease selected for treatment by means of gene therapy a good candidate for such treatment?

b. Describe the natural history and range of expression of the disease selected for treatment. What objective and/or quantitative measures of disease activity are available? In your view, are the usual effects of the disease predictable enough to allow for meaningful assessment of the results of gene therapy?

c. Is the protocol designed to prevent all manifestations of the disease, to halt the progression of the disease after symptoms have begun to appear, or to reverse manifestations of the disease in seriously ill victims?

d. What alternative therapies exist? In what groups of patients are these therapies effective? What are their relative advantages and disadvantages as compared with the proposed gene therapy?

2. Transfer of DNA for Other Purposes. a. Into what cells will the recombinant DNA be transferred? Why is the transfer of recombinant DNA necessary for the proposed research? What questions can be answered by using recombinant DNA?

b. What alternative methodologies exist? What are their relative advantages and disadvantages as compared to the use of recombinant DNA?

B. Research design, anticipated risks and benefits.—1. *Structure and characteristics of the biological system.* Provide a full description of the methods and reagents to be employed for gene delivery and the rationale for their use. The following are specific points to be addressed:

a. What is the structure of the cloned DNA that will be used?

(1) Describe the gene (genomic or cDNA), the bacterial plasmid or phage vector, and the delivery vector (if any). Provide complete nucleotide sequence analysis or a detailed restriction enzyme map of the total construct.

(2) What regulatory elements does the construct contain (e.g., promoters, enhancers, polyadenylation sites, replication origins, etc.)? From what source are these elements derived? Summarize what is currently known about the regulatory character of each element.

(3) Describe the steps used to derive the DNA construct.

b. What is the structure of the material that will be administered to the patient?

(1) Describe the preparation, structure, and composition of the materials that will be given to the patient or used to treat the patient's cells.

(a) If DNA, what is the purity (both in terms of being a single DNA species and in terms of other contaminants)? What tests have been used and what is the sensitivity of the tests?

(b) If a virus, how is it prepared from the DNA construct? In what cell is the virus grown (any special features)? What medium and serum are used? How is the virus purified? What is its structure and purity? What steps are being taken (and assays used with their sensitivity) to detect VL30 RNA, other nucleic acids, or proteins) or contaminating viruses (both replication-competent or replication-defective) or other organisms in the cells or serum used for preparation of the virus stock including any contaminants that may have biological effects?

(c) If co-cultivation is employed, what kinds of cells are being used for co-cultivation? What steps are being taken (and assays used with their sensitivity) to detect and eliminate any contaminating materials? Specifically, what tests are being done to assess the material to be returned to the patient for the presence of live or killed donor cells or other non-vector materials (for example, VL30 sequences) originating from those cells?

(d) If methods other than those covered by (a)-(c) are used to introduce new genetic information into target cells, what steps are being taken to detect and eliminate any contaminating materials? What are possible sources of contamination? What is the sensitivity of tests used to monitor contamination?

(2) Describe any other material to be used in preparation of the material to be administered to the patient. For example, if a viral vector is proposed, what is the nature of the helper virus or

cell line? If carrier particles are to be used, what is the nature of these?

2. Preclinical studies, including risk-assessment studies. Describe the experimental basis (derived from tests in cultured cells and animals) for claims about the efficacy and safety of the proposed system for gene delivery and explain why the model(s) chosen is (are) the most appropriate.

a. Laboratory studies of the delivery system.

(1) What cells are the intended target cells of recombinant DNA? If target cells are to be treated ex vivo and returned to the patient, how will the cells be characterized before and after treatment? What is the theoretical and practical basis for assuming that only the target cells will incorporate the DNA?

(2) Is the delivery system efficient? What percentage of the target cells contain the added DNA?

(3) How is the structure of the added DNA sequences monitored and what is the sensitivity of the analysis? Is the added DNA extrachromosomal or integrated? Is the added DNA unrearranged?

(4) How many copies are present per cell? How stable is the added DNA both in terms of its continued presence and is structural stability?

b. Laboratory studies of gene transfer and expression.

(1) What animal and cultured cell models were used in laboratory studies to assess the *in vivo* and *in vitro* efficacy of the gene transfer system? In what ways are these models similar to and different from the proposed human treatment?

(2) What is the minimal level of gene transfer and/or expression that is estimated to be necessary for the gene transfer protocol to be successful in humans? How was this level determined?

(3) Explain in detail all results from animal and cultured cell model experiments which assess the effectiveness of the delivery system (part 2.a. above) in achieving the minimally required level of gene transfer and expression (2.b.(2) above).

(4) To what extent is expression only from the desired gene (and not from the surrounding DNA)? To what extent does the insertion modify the expression of other genes?

(5) In what percentage of cells does expression from the added DNA occur? Is the product biologically active? What percentage of normal activity results from the inserted gene?

(6) Is the gene expressed in cells other than the target cells? If so, to what extent?

c. Laboratory studies pertaining to the safety of the delivery/expression system.

(1) If a retroviral system is used:

(a) What cell types have been infected with the retroviral vector preparation? Which cells, if any, produce infectious particles?

(b) How stable are the retroviral vector and the resulting provirus against loss, rearrangement, recombination, or mutation? What information is available on how much rearrangement or recombination with endogenous or other viral sequences is likely to occur in the patient's cells? What steps have been taken in designing the vector to minimize instability or variation? What laboratory studies have been performed to check for stability, and what is the sensitivity of the analyses?

(c) What laboratory evidence is available concerning potential harmful effects of the transfer, e.g., development of neoplasia, harmful mutations, regeneration of infectious particles, or immune responses? What steps have been taken in designing the vector to minimize pathogenicity? What laboratory studies have been performed to check for pathogenicity, and what is the sensitivity of the analyses?

(d) Is there evidence from animal studies that vector DNA has entered untreated cells, particularly germ line cells? What is the sensitivity of the analyses?

(e) Has a protocol similar to the one proposed for a clinical trial been carried out in non-human primates and/or other animals? What were the results? Specifically, is there any evidence that the retroviral vector has recombined with any endogenous or other viral sequences in the animals?

(2) If a non-retroviral delivery system is used: What animal studies have been done to determine if there are pathological or other undesirable consequences of the protocol (including insertion of DNA into cells other than those treated, particularly germ line cells)? How long have the animals been studied after treatment? What tests have been used and what is their sensitivity?

3. Clinical procedures, including patient monitoring. Describe the treatment that will be administered to patients and the diagnostic methods that will be used to monitor the success or failure of the treatment. If previous clinical studies using similar methods have been performed by yourself or others, indicate their relevance to the proposed study.

a. Will cells (e.g., bone marrow cells) be removed from patients and treated ex vivo? If so, what kinds of cells will be removed from the patients, how many, how often, and at what intervals?

b. Will patients be treated to eliminate or reduce the number of cells containing malfunctioning genes (e.g., through radiation or chemotherapy)?

c. What treated cells (or vector/DNA combination) will be given to patients? How will the treated cells be administered? What volume of cells will be used? Will there be single or multiple treatments? If so, over what period of time?

d. How will it be determined that new gene sequences have been inserted into the patient's cells and if these sequences are being expressed? Are these cells limited to the intended target cell populations? How sensitive are these analyses?

e. What studies will be done to assess the presence and effects of the contaminants?

f. What are the clinical endpoints of the study? Are there objective and quantitative measurements to assess the natural history of the disease? Will such measurements be used in following patients? How will patients be monitored to assess specific effects of the treatment on the disease? What is the sensitivity of the analyses? How frequently will follow-up studies be done? How long will patient follow-up continue?

g. What are the major beneficial and adverse effects of treatment that you anticipate? What measures will be taken in an attempt to control or reverse these adverse effects if they occur? Compare the probability and magnitude of potential adverse effects on patients with the probability and magnitude of deleterious consequences from the disease if recombinant DNA transfer is not used.

h. If a treated patient dies, what special post mortem studies will be performed?

4. Public health considerations. Describe any potential benefits and hazards of the proposed therapy to persons other than the patients being treated. Specifically:

a. On what basis are potential public health benefits or hazards postulated?

b. Is there a significant possibility that the added DNA will spread from the patient to other persons or to the environment?

c. What precautions will be taken against such spread (e.g., to patients sharing a room, health-care workers, or family members)?

d. What measures will be undertaken to mitigate the risks, if any, to public health?

e. In light of possible risks to offspring, including vertical transmission, will birth control measures be recommended to the patient? Are such concerns applicable to health care personnel?

5. Qualifications of investigators, adequacy of laboratory and clinical facilities. Indicate the relevant training and experience of the personnel who will be involved in the preclinical studies and clinical administration of recombinant DNA. In addition, please describe the laboratory and clinical facilities where the proposed study will be performed.

a. What professional personnel (medical and nonmedical) will be involved in the proposed study and what is their relevant expertise? Please provide curricula vitae of key professional personnel (see Section III–E).

b. At what hospital or clinic will the treatment be given? Which facilities of the hospital or clinic will be especially important for the proposed study? Will patients occupy regular hospital beds or clinical research center beds? Where will patients reside during the follow-up period? What special arrangements will be made for the comfort and consideration of the patients? Will the research institution designate an ombudsman, patient care representative, or other individual to help protect the rights and welfare of the patient?

C. *Selection of patients.* Estimate the number of patients to be involved in the proposed study. Describe recruitment procedures and patient eligibility requirements, paying particular attention to whether these procedures and requirements are fair and equitable.

1. How many patients do you plan to involve in the proposed study?

2. How many eligible patients do you anticipate being able to identify each year?

3. What recruitment procedures do you plan to use?

4. What selection criteria do you plan to employ? What are the exclusion and inclusion criteria for the study?

5. How will patients be selected if it is not possible to include all who desire to participate?

D. *Informed consent.* Indicate how patients will be informed about the proposed study and how their consent will be solicited. The consent procedure should adhere to the requirements of DHHS regulations for the protection of human subjects (45 Code of Federal Regulations, Part 46). If the study involves pediatric or mentally handicapped patients, describe procedures for seeking the permission of parents or guardians and, where applicable, the assent of each patient. Areas of special concern highlighted below include potential adverse effects, financial costs, privacy, long-term follow-up, and post mortem examination.

1. How will the major points covered in Sections I–A through I–C of this document be disclosed to potential participants in this study and/or parents or guardians in language that is understandable to them?

2. How will the innovative character and the theoretically possible adverse effects of the experiment be discussed with patients and/or parents or guardians? How will the potential adverse effects be compared with the consequences of the disease?

3. What explanation of the financial costs of the experiment, follow-up care, and any available alternatives will be provided to patients and/or parents or guardians?

4. How will patients and/or their parents or guardians be informed that the innovative character of the experiment may lead to great interest by the media in the research and in treated patients?

5. How will patients and/or their parents or guardians be informed:

a. About the irreversible consequences of some of the procedures performed?

b. About any adverse medical consequences that may occur if a subject withdraws from the study once it has begun?

c. About expectations of willingness to cooperate in long-term follow-up?

d. About expectations that permission to perform an autopsy will be granted in the event of a patient's death following transfer as a precondition for a patient's participation in the study? This stipulation is included because an accurate determination of the precise cause of a patient's death would be of vital importance to all future patients.

E. *Privacy and confidentiality.* Indicate what measures will be taken to protect the privacy of patients and their families as well as to maintain the confidentiality of research data.

1. What provisions will be made to honor the wishes of individual patients (and the parents or guardians of pediatric or mentally handicapped patients) as to whether, when, or how the identity of patients is publicly disclosed?

2. What provision will be made to maintain the confidentiality of research data, at least in cases where data could be linked to individual patients?

II. Special Issues

Although the following issues are beyond the normal purview of local IRBs, the RAC and its Subcommittee request that investigators respond to questions A and B below.

A. What steps will be taken, consistent with point I-E above, to ensure that accurate and appropriate information is made available to the public with respect to such public concerns as may arise from the proposed study?

B. Do you or your funding sources intend to protect under patent or trade secret laws either the products or the procedures developed in the proposed study? If so, what steps will be taken to permit as full communication as possible among investigators and clinicians concerning research methods and results?

III. Requested Documentation

In addition to responses to the questions raised in these "Points to Consider," please submit the following materials:

A. Your protocol as approved by your local IRB and IBC.

B. Results of local IRB and IBC deliberations and recommendations that pertain to your protocol.

C. A one-page scientific abstract of the protocol.

D. A one-page description of the proposed experiment in nontechnical language.

E. Curricula vitae for key professional personnel.

F. An indication of other federal agencies to which the protocol is being submitted for review.

G. Any other material which you believe will aid in the review.

IV. Reporting Requirements

A. Serious adverse effects of treatment should be reported immediately to both the local IRB and the NIH Office for Protection from Research Risks, and a written report should be filed with both groups. A copy of the report should also be forwarded to the NIH Office of Recombinant DNA Activities (ORDA).

B. Reports regarding the general progress of patients should be filed with both your local IRB and ORDA within 6 months of the commencement of the experiment and at six-month intervals thereafter. These twice-yearly reports should continue for a sufficient period of time to allow observation of all major effects. In the event of a patient's death, a summary of the special post mortem studies and statement of the cause of

death should be submitted to the IRB and ORDA, if available.

Footnotes:

1. The Food and Drug Administration (FDA) has jurisdiction over drug products intended for use in clinical trials of human gene transfer. For general information on FDA's policies and regulatory requirements, please see the **Federal Register**, Volume 51, pages 23309–23313, 1986.

2. The term "patient" and its variants are used in the text as a shorthand designation for "patient-subject."

III. Proposal to Amend Appendix H of the NIH Guidelines

The **Federal Register** of June 24, 1988 (53 FR 23775), contained a proposal by the Postal Service to ban the shipment of all etiologic agents, or materials believed to contain etiologic agents, as defined by the Department of Transportation and the Department of Health and Human Services regulations. Under Appendix H of the current NIH Guidelines for Research Involving Recombinant DNA Molecules of May 7, 1986 (52 FR 16976), this ban could apply to all shipments of recombinant molecules contained within an organism or virus, regardless of whether they are potentially hazardous to human health. Such a ban could affect the terms and conditions under which commercial shippers would transport recombinant DNA products. The RAC recognized the potential significance of this issue and referred it to the Definitions Subcommittee of the RAC, which met on December 5, 1988, and developed the following proposal:

A. Proposed replacement of Appendix H

"Preamble:

"Recombinant DNA molecules contained in an organism or in a viral genome shall be shipped under the appropriate requirements of the U.S. Public Health Service (42 CFR, part 72), U.S. Department of Agriculture (9 CFR subchapters D&E; 7 CFR, part 340) and/or the U.S. Department of Transportation (49 CFR, part 173). For purposes of these Guidelines the following recombinant DNA molecules contained in an organism or in a viral genome shall be shipped as etiologic agents: (1) those listed as Class 2, 3, or 4 agents in Appendix B; and/or (2) those contained in reference G–III–2 [1]; and/or (3) those regulated as animal or plant pathogens or pests under titles 7 and 9 CFR; or (4) host organisms containing recombinant DNA derived from those organisms or viral genomes.

"Appendix H–I:

"An illustration of one method of packaging and labeling of recombinant DNA-containing microorganisms and viral genomes defined as etiologic agents in the Preamble is shown in Figures 1, 2, and 3. Additional information on packaging and shipping is given in the "Laboratory Safety Monograph—A Supplement to the NIH Guidelines for Recombinant DNA Research," available from the Office of Recombinant DNA Activities and in the publication Biosafety in Microbiological and Biomedical Laboratories.[1]

"Appendix H–II—Footnote and References of Appendix H:

1. Biosafety in Microbial and Biomedical Laboratories, 2nd Edition, (May 1988), U.S. Department of Health and Human Services, Centers for Disease Control, Atlanta, Georgia 30333, and National Institutes of Health, Bethesda, Maryland 20892."

B. Proposed Replacement of the Illustration in Appendix H.

The heading changes and the replacement paragraph were written by NIH staff on December 12, 1988, to reflect the intent of the Definitions Subcommittee of the RAC.

The replacement paragraph would read:

"Figures 1, 2, and 3 depict one method for the packaging and labeling of those recombinant DNA-containing organisms and viral genomes defined as etiologic agents in the Preamble of Appendix H. The key features are identified in Figure 1. It is the responsibility of the shipper to comply with the applicable requirements of 42 CFR part 72 and 49 CFR part 173 when shipping biological materials or etiologic agents. It is recommended that all organisms containing recombinant molecules, which are exempt and/or Class 1 agents, should be shipped in secure, leak-proof containers."

After considering this proposal at the January 30, 1989, meeting, the RAC members agreed that it solved 90 percent of the difficulties posed by the original version, but that additional work was needed.

The Definitions Subcommittee met on July 12, 1989, and adopted the following motion:

"To recommend to the Recombinant DNA Advisory Committee consideration and adoption of the following amendment to Appendix H of the NIH Guidelines for Research Involving Recombinant DNA Molecules:

"Appendix H is to be replaced as follows:

"Appendix H—Shipment.

"Recombinant DNA molecules contained in an organism or in a viral genome shall be shipped under the applicable regulations of the U.S. Postal Service; the U.S. Public Health Service (42 CFR Part 72); the U.S. Department of Agriculture (9 CFR subchapters D and E; 7 CFR Part 340); and/or the U.S. Department of Transportation (49 CFR Parts 171–179).

"For purposes of the NIH Guidelines:

"Host organisms or viruses will be defined as etiologic agents regardless of whether or not they contain recombinant DNA if they are regulated as human pathogens under U.S. Public Health Service (42 CFR Part 72) or as animal pathogens or plant pests under the Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture (Titles 9 and 7 CFR, respectively).

"Additionally, host organisms and viruses will be defined as etiologic agents if they contain recombinant DNA when:

"A. the recombinant DNA includes the complete genome of a host organism or virus regulated as a human or animal pathogen or a plant pest; or

"B. the recombinant DNA codes for a toxin or other factor directly involved in eliciting human, animal or plant disease or inhibiting plant growth and is carried on an expression vector or within the host chromosome and/or when the host organism contains a conjugation proficient plasmid or a generalized transducing phage; or

"C. the recombinant DNA comes from a host organism or virus regulated as a human or animal pathogen or as a plant pest and has not been adequately characterized to demonstrate that it does not code for a factor involved in eliciting human, animal or plant disease.

"Appendix H–1—Footnotes and References of Appendix H.

"For further information on shipping etiologic agents, please contact: (1) Centers for Disease Control, ATTN: Biohazards Control Office, 1600 Clifton Road, Atlanta, Georgia 30333, (404) 639–3883, FTS 236–3883; (2) Department of Transportation, ATTN: Office of Hazardous Materials Transportation, 400 7th Street SW., Washington, DC 20590, (202) 366–4545; or (3) Department of Agriculture, ATTN: Animal & Plant Health Inspection Service, 6505 Belcrest Road, Hyattsville, Maryland 20782, (301) 436–7885 for Animal Pathogens, (301) 436–7612 for Plant Pests."

IV. Proposed Amendment of the NIH Guidelines Regarding Klebsiella oxytoca

In a letter dated August 3, 1989, Dr. Rogers Yocum, Director, Biochemical Products and Processes, Biotechnica International, Cambridge, Massachusetts, requests that certain experiments involving all strains derived from *Klebsiella oxytoca* strain M5a1 be given exempt or BL1 status under the NIH Guidelines.

In his August 3, 1989 letter, Dr. Yocum states:

"BioTechnica International, Inc. would like to request that certain experiments involving all strains derived from *Klebsiella oxytoca* strain M5a1 be given exempt or BL1 status in the NIH Guidelines for Recombinant DNA Research. We believe that *K. oxytoca* M5a1 has had a long history of safe use in many laboratories and that BL1 containment should be more than adequate. Self cloning experiments and experiments involving DNA clones isolated from non-pathogenic organisms or clones that are known not to encode production of toxic materials and transformed into M5a1 should be as harmless as experiments that utilize the non-recombinant strain. Below we will document what we know of the history and the nature of *K. oxytoca* M5a1, which we shall call 'M5a1' from here on.

"The earliest reference we know for M5a1 is a 1946 paper on butanediol fermentation (Freeman (1946), The fermentation of sucrose by *Aerobacter aerogenes*, Chemical Abstracts in Biochemistry 41: 389–398). M5a1 was isolated in the 1930's by Dr. Elizabeth McCoy at the University of Wisconsin (Winston Brill, personal communication). The strain was originally classified as *Aerobacter aerogenes*, (Wilson (1955) Nitrogen fixation in *Aerobacter aerogenes*, in Biochemistry of

Nitrogen, A.I. Vitanen Homage Volume, Ann. Acad. Scientarium. Fennicae Ser. AII *60*. 139–150; Mahl et al. (1965) Nitrogen fixation by members of the tribe *Klebsiella*, J. Bact. *89*: 1481–1487). The strain was distributed to various workers interested in free living nitrogen fixing bacteria in the 1940's by Dr. M.J. Johnson of the University of Wisconsin and in the 1960's by Dr. Perry Wilson also of the University of Wisconsin. In 1965 the strain was reclassified as *Klebsiella pneumoniae* by the CDC (CDC #2551–63). M5a1 was once again reclassified in 1977 to *K. oxytoca* (CDC Publication 78–8356). The primary taxonomic difference between *K. oxytoca* and *K. pneumonia* is that *K. oxytoca* produces indole while *K. pneumoniae* does not. We have tested M5a1 for indole production and have confirmed that M5a1 does produce indole from tryptophan. In general, *K. oxytoca* is found in the intestines of humans and animals, and in 'botanical and aquatic environments' (Bergey's Manual of Systematic Bacteriology (1986), Sneath, ed., Williams and Wilkins, Baltimore). Thus *K. oxytoca* appears to be ubiquitous. Wild-type M5a1 is resistant to low levels of ampicillin (up to 100 μg/ml) but it is sensitive to higher levels of ampicillin and usual experimental levels of kanamycin, tetracycline, cephalosporins and chloramphenicol.

"Interest in M5a1 expanded in 1971 (Streicher et al. (1971), Transduction of the nitrogen fixation genes in *Klebsiella pneumoniae* DNAs *68*: 1174–1177). M5a1 was one of two strains of *K. pneumoniae* that was shown to be sensitive to bacteriophage P1 out of a total of 27 strains tested. The significance of P1 sensitivity was that P1 is routinely used for generalized transduction in *E. coli*, an extremely useful genetic technique. The ability to transduce mutations among strains of *K. pneumoniae* would greatly accelerate study of the genes involved in nitrogen fixation. Thus M5a1 became the strain of choice for studying the genetics of nitrogen fixation in at least four different labs: Ray Valentine, University of California, Berkeley; Winston Brill, University of Wisconsin; Ray Dixon, Sussex; Ethan Signer and Fred Ausubel, MIT. The MIT lab renamed M5a1 as 'KP1,' which reflects its seminal position in their strain collection. The MIT group then discovered that M5a1 would support growth of the lambdoid caliphage 424 and that M5a1 had a DNA restriction system that prevented efficient transfer of DNA from *E. coli* to M5a1. They subsequently isolated a restrictionless mutant of M5a1, called KP5022, which became the parent of many other derivatives (Streicher et al. (1974) Regulation of Nitrogen Fixation in *Klebsiella pneumoniae*, J. Bact. *120*: 815–821).

"M5a1 was then shown to be 'non-capsulated,' a trait that is common with *E. coli* K–12, and which may account for the reduced pathogenicity of *E. coli* K–12 (Shanmugam et al. (1974) Bioch. Biophys. Acta *338*: 545–553). In fact it was probably the non-capsulated nature of M5a1 that made it more susceptible than other *Klebsiella* strains to phages of P1 and 424.

"Winston Brill's group showed that bacteriophage Mu could infect M5a1. The group then used variants of Mu to mutagenize and construct fusions of *nif* genes to *E. coli* lacZ. They renamed M5a1 as 'UN,' and generated many hundreds of derivatives, such as UN1290, which contains the recA56 allele of *E. coli* transduced into M5a1 (MacNeil et al. (1981), Regulation of Nitrogen Fixation in *Klebsiella pneumoniae*, J. Bact. *145*: 348–357; MacNeil et al (1978) Fine structure mapping and complementation analysis of *nif* genes in *Klebsiella pneumoniae*, J. Bact. *136*: 253–288).

"During the 1970's there was much work at the University of Sussex and elsewhere on the enzymology of nitrogen fixation. Large amounts of nitrogenase enzyme were required, and since the genetic work was being done in M5a1 and its derivatives, M5a1 became the organism of choice for producing nitrogenase. M5a1 was grown routinely in 1,000 liter fermentors, and kilogram quantities of cell pastes were routinely worked up, using no special precautions (Eady et al. (1972) Biochem. J. *128*: 655–675). In fact, they reported injecting live M5a1 into rabbits for the purpose of raising antibodies against intact cells. No pathogenic effects were observed (see Appendix I, page 4). Appendix I also documents the successful M5a1 declassification petitions of the Postgate lab at Sussex to the Genetic Manipulation Advisory Committee, U.K. They obtained permission to perform various M5a1 recombinant experiments under conditions of good microbiological practice. Thus M5a1 has been used in several labs, both genetic and biochemical since 1946. No harmful effects of M5a1 have been reported from any of the labs.

"Finally, starting in the 1970's, many recombinant DNA experiments have been done with M5a1. In particular, all of the genes involved in nitrogen fixation and many of the genes involved in regulation of nitrogen metabolism of M5a1 have been cloned into *E. coli* K–12 (for examples, see Dixon et al. (1976) Construction of a P plasmid carrying nitrogen fixation genes from *Klebsiella pneumoniae*, Nature *260*: 268–271; Cannon et al. (1988) The nucleotide sequence of the *nif* gene of *Klebsiella pneumoniae*, Nuc. Acids. Res. *16*: 11379).

"The current NIH guidelines for recombinant DNA work (Federal Register Volume *51*, no. 88, May 7, 1986) are contradictory with respect to *Klebsiella*. On one hand, the genus *Klebsiella* is considered to be a natural DNA exchanger with *E. coli*, and so any cloning between *E. coli* and *Klebsiella* in *either direction* is exempt (p. 16967). On the other hand, *Klebsiella*—all species and serotypes—is listed as a Class 2 pathogen, and as such, cloning into *Klebsiella* requires BL2 containment (paragraph III–B–1–a, p. 16960) and cloning recombinant DNA from *Klebsiella* into non-pathogenic prokaryotes (i.e. *E. coli* K–12) also requires BL2 containment (paragraph III–B–2–a, p. 16960). We request that the status of *Klebsiella* be clarified, particularly in the case of *K. oxytoca* strain M5a1. Specifically, we propose that the following classes of experiments and fermentations of the resulting organisms be exempted from the guidelines:

"(1) All self cloning experiments involving DNA from M5a1 and any of its derivatives.

"(2) All experiments involving clones of M5a1 DNA into *E. coli* K–12.

"In addition, we propose that the following classes of experiments be given BL1 status:

"(1) All experiments involving clones of *E. coli* K–12 DNA into M5a1.

"(2) All experiments involving well defined clones from nonpathogenic organisms or clones known not to contain DNA that encodes production of material toxic to vertebrates into M5al.

"We feel that the history of safe use of M5al and the ubiquitous distribution of *K. oxytoca* justify these containment conditions."

Additional documentation supporting this request is provided in an appendix that will be distributed at the meeting. This material also is available upon request from ORDA.

V. Other Matters to be Considered

Time permitting, the following agenda items will be presented and discussed:

1. The National Research Council has conducted a project entitled, *Scientific Evaluation of the Introduction of Genetically Modified Microorganisms and Plants into the Environment.* Publication of this report is scheduled for September 1989. The results of this project will be of use to the RAC in its consideration of revisions to Section I–A, "Definition of Recombinant DNA" of the NIH Guidelines.

2. The Department of Commerce has issued an interim rule regarding the export of microorganisms, including specific provisions requiring an export license for "all genetically engineered or manipulated agents." A revised rule is expected to be published shortly. A Department of Commerce representative will present a status report on the rule.

OMB's "Mandatory Information Requirements for Federal Assistance Program Announcements" (45 FR 39592) requires a statement concerning the official government programs contained in the Catalog of Federal Domestic Assistance. Normally NIH lists in its announcements the number and title of affected individual programs for the guidance of the public. Because the guidance in this notice covers not only virtually every NIH program but also essentially every Federal research program in which DNA recombinant molecule techniques could be used, it has been determined to be not cost effective or in the public interest to attempt to list these programs. Such a list would likely require several additional pages. In addition, NIH could not be certain that every Federal program would be included as many Federal agencies, as well as private organizations, both national and international, have elected to follow the NIH Guidelines. In lieu of the individual program listing, NIH invites readers to direct questions to the information address above about whether individual

programs listed in the Catalog of Federal Domestic Assistance are affected.

Jay Moskowitz,

Associate Director, Office of Science Policy and Legislation, National Institutes of Health.

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federal register

Friday
September 1, 1989

Part VI

Department of Transportation

Urban Mass Transportation Administration

49 CFR Part 633
Project Management Oversight; Final Rule

DEPARTMENT OF TRANSPORTATION

Urban Mass Transportation Administration

49 CFR Part 633

[Docket No. 87-B]

RIN 2132-AA31

Project Management Oversight

AGENCY: Urban Mass Transportation Administration (UMTA), DOT.

ACTION: Final rule.

SUMMARY: This final rule implements section 324 of the Surface Transportation and Uniform Relocation Assistance Act of 1987. This section permits UMTA to use up to ½ of 1 percent of the funds made available in each fiscal year under UMTA's capital grants programs for project management oversight of major capital projects. Section 324 also requires a recipient implementing a major capital project with Federal financial assistance from UMTA to prepare and implement a project management plan. Finally, section 324 requires UMTA to implement its provisions by regulation. This rule will improve the quality of major capital projects receiving funding from UMTA.

EFFECTIVE DATE: This rule will be effective on October 2, 1989.

FOR FURTHER INFORMATION CONTACT: For general program questions: Frank McCarron, Office of Grants Management, Room 9315, UMTA, 400 7th St., SW., Washington, DC 20590, (202) 366–2440. For legal matters: Susan Schruth, Office of Chief Counsel, Room 9316, same address, (202) 366–4011.

SUPPLEMENTARY INFORMATION:

I. Background

UMTA provides Federal financial assistance to support urban areas in the planning, development, and improvement of comprehensive mass transportation systems. This assistance is provided by means of a variety of programs within the statutory authority granted by the Urban Mass Transportation Act of 1964, as amended (the UMT Act). UMTA assistance comes in many forms, including providing a matching share for capital construction of mass transportation projects, research and development dollars, assistance for operations, and several small, specialized programs.

A. *UMTA Project Management Initiatives.* Beginning in 1983, UMTA reviewed the way in which it provided oversight of one of its principal functional areas—construction of major capital projects by recipients of its funds. After examining a number of other Federal and related agency oversight programs, UMTA concluded that it was important to increase its independent oversight of significant UMTA-funded projects. UMTA developed a national project management oversight program for major capital projects using independent contractors. At that time, the definition of major capital project focused on new rail start projects. Under the program, UMTA assigned independent contractors, paid by and reporting directly to UMTA, to perform project management oversight functions on certain major capital projects. This arrangement allowed UMTA to more carefully monitor certain major capital projects without increasing its staff.

The program was useful immediately to UMTA and its recipients. The contractor's report became a key resource document UMTA used in evaluating a recipient's technical capacity and capability to execute a major capital project. The contractor's report also enabled the recipient to objectively assess various aspects of its capabilities.

There were, however, significant funding problems with this UMTA initiative. UMTA was not authorized to use funds from any of its major capital programs to provide for such a program, and instead had to rely on funding from its smaller research and study programs. This problem was resolved when Congress, in both the FY 1986 and FY 1987 DOT appropriation acts, authorized UMTA to use up to ½ of 1 percent of the funding available under its major capital programs in each of those fiscal years to contract directly with independent contractors for project management oversight.

By competitive procurement in 1986, UMTA retained a number of highly qualified national firms as contractors. Currently these contractors are working actively on over 25 separate assignments covering over 40 projects. In making assignments, considerable effort is taken to make certain that there is no real or apparent conflict of interest between an UMTA contractor and the project(s) assigned to the contractor. Once assigned to a project, the contractor monitors the recipient's overall implementation of the project and reports on it directly to UMTA. Such a report emphasizes project cost, schedule, and quality, and enables UMTA to assess effectively a recipient's performance on a particular project. When necessary, the report also makes recommendations for modifying practices to improve project performance.

B. *Statutory Program.* Because of the success and usefulness of UMTA's project oversight initiative, Congress included a project management oversight program in UMTA's reauthorization legislation (the Surface Transportation and Uniform Relocation Assistance Act of 1987, (STURAA) Pub. L. 100–17, effective April 2, 1987). Section 324 of STURAA added a new section 23 to the UMT Act.

Section 23 goes beyond UMTA's initiative of the mid-1980's by specifying three elements of the project management oversight program. First, UMTA may use up to ½ of 1 percent of the funds available under sections 3, 9, and 18 of the Urban Mass Transportation Act of 1964, as amended, 23 U.S.C. 103(e)(4) (interstate transfer—transit projects), and section 14(b) of the National Capital Transportation Amendments of 1979 (the Washington, DC Metrorail system) for project management oversight. Second, section 23 of the UMT Act requires a recipient constructing a major capital project to prepare a project management plan and, upon UMTA approval, to implement such plan. And third, section 23 requires UMTA to issue regulations to implement its provisions. This rulemaking is intended to fulfill this third provision of section 23.

II. The NPRM

UMTA published its notice of proposed rulemaking (NPRM) on August 11, 1987 (52 FR 29702). In response to the NPRM, UMTA received seventeen (17) comments, broken-down by the following categories:

11 UMTA urban recipients and lcoal governments
1 Contractor providing PMO services
4 State governments
1 Public Trade Association

All commenters were in general support of the PMO regulation, although most made recommendations on specific aspects of the rule. These specific recommendations are noted below and discussed in detail in the next section of the preamble ("Section-by-Section Analysis").

UMTA specifically sought comment on the definition of major capital project, and seven commenters requested clarification of this definition. Two commenters addressed the time period for the submission of the project management plan. Five commenters proposed that the requirement for monthly submissions of cost and data be changed to a quarterly submission. Two commenters suggested that a project

management plan be deemed approved if the Administrator's review is not completed within sixty days.

Commenters also sought deletion of updated ridership estimates, the addition of exemptions from the PMO program, exclusion of the section 18 program from the PMO regulation, and clarification of the process for obtaining a waiver from certain items otherwise required to be included in the project management plan.

The final rule published today is substantively similar to the proposed rule. The following section-by-section analysis discusses these significant comments in more detail, as well as the agency's response to these comments.

III. Section-by-Section Analysis and Response To Public Comments

This portion of the preamble discusses each section of the final rule. It includes a review of any significant comments on a particular issue, as well as UMTA's response to such comments and its reasons for making the decisions incorporated in the final rule. The structure of the final rule is somewhat different from the proposed rule: to make the rule clearer, the agency has broken down a few large sections into several smaller sections. This, combined with descriptive section headings, should make the rule easier to use.

Subpart A—General Provisions

Section 633.1 Purpose

This section explains that the purpose of the rule is to implement section 23 of the UMT Act, as added by section 324 of the Surface Transportation and Uniform Relocation Assistance Act of 1987. The agency received no comments on this section. The agency has added to this section a brief description of the two different thrusts of the part—project management oversight and project management plans.

Section 633.3 Scope

This section provides that the part applies to any recipient of UMTA financial assistance undertaking a major capital project. The agency received no comments on this section.

Section 633.5 Definitions

This section contains ten definitions specifically applicable to this part. Several definitions drew comment.

Major Capital Project. "Major Capital Project" is an important element of this regulation, since it triggers both project management oversight on the part of UMTA and requires a recipient to comply with the project management plan provisions of the regulation. The NPRM defined a major capital project as having three separate categories: (1) Any new start rail project or extension; (2) any rail modernization project costing more than $100 million; or (3) a project determined to be a major capital project for purposes of this program by the Administrator. We noted in the preamble to the NPRM that one area in which the Administrator generally would be expected to exercise discretion to designate a project as major is any project costing more than $100 million.

Seven commenters recommended that further consideration be given to our definition. Commenters noted that the $100 million threshold language was not included in the proposed rule itself. Similarly, commenters criticized the lack of concise criteria or process for determining what constitutes a major capital project in the third instance—that is, the Administrator's discretionary designation of a project as "major"—and suggested that UMTA establish evaluation criteria to define more narrowly and objectively the Administrator's discretion. Commenters are concerned that the lack of objective criteria in this regard could create uncertainty and confusion as project planning, programming and implementation proceed without a recipient knowing whether the project might at some point be deemed "major" by UMTA.

UMTA recognizes this concern; in response, we have included in the final rule more specific guidance regarding the determination of what may constitute a major capital project. The final rule breaks down the concept of major capital project into three principal types. First is any new start project or extension. Second is any rehabilitation or modernization project, if costs exceed $100 million. These projects automatically are subject to the provisions of Part 633. That is, automatically these recipients will have to develop a project management plan, and they will be subject to some kind of project management oversight. The agency anticipates that these first two categories will constitute the great majority of the projects covered by part 633.

The third principal category identified in the major capital project definition includes those projects "deemed major" by the Administrator. It is this third category which has caused confusion among commenters and which we have clarified in the final rule. This category provides the Administrator with the necessary flexibility to apply the benefits of the project management oversight program to projects on an as-needed basis. This is not to say that a decision about any project would be arbitrary or capricious. Indeed, a necessary element of each decision by the Administrator is a determination that the project management oversight program will benefit specifically the agency or the recipient, or both.

Although the agency cannot specifically identify all types of cases in which the Administrator may make this type of determination, we have tried to list both here and in the definition section of the regulation the most likely types of projects under this third category:

(1) A project that generally is expected to have a total project cost in excess of $100 million;

(2) A project that is not exclusively for the routine acquisition, maintenance, or rehabilitation of vehicles or other rolling stock;

(3) A project that involves new technology;

(4) A project that is of a unique nature for the recipient; or

(5) A project involving a recipient whose past experience indicates to the agency the appropriateness of the extension of this program.

The final rule also makes it clear that any project deemed major by the Administrator will be subject to both parts of the project management oversight program—developing a project management plan and subject to project management oversight.

One final note concerning projects subject to a discretionary determination of "major" by the Administrator. Section 23 of the UMT Act also provides that the definition of major capital project "shall exclude projects for the acquisition of vehicles or other rolling stock, or for the performance of vehicle maintenance or rehabilitation." UMTA believes that the legislative intent in this regard was to exclude *routine* acquisition, rehabilitation or maintenance of vehicles or rolling stock from coverage of the rule—that is, to exclude those activities undertaken by a recipient in its normal course of business to maintain current service with existing or on-the-shelf technology. On the other hand, in UMTA's view the acquisition rehabilitation, or maintenance of vehicles by a recipient using technology or methods not utilized curently in the day-to-day operation of transit systems in this country, or in the day-to-day operations of a particular recipient, should not be excluded categorically from the project management oversight program, nor was it meant to be. Accordingly, projects involving non-routine acquisition, rehabilitation or maintenance are included in the third

category of major capital projects—those within the descretion of the Administrator to designate as major if the Administrator determines it is to the benefit of UMTA, the recipient, or both.

Project Management. UMTA has added a definition of "project management plan" to the final rule. Under the statute, such a plan must be prepared by each recipient undertaking a major capital project, and must be approved by UMTA. The plan is the key reference document for a project participant to implement, and for an observer to monitor, a project. It is a dynamic document which may change often and be revised as the project passes through different phases. In addition to being a recipient's key management tool, the project management plan is a primary resource document used by UMTA in determining a recipient's technical capacity and capability to carry out a project.

Grantee. Finally, to be consistent with other UMTA regulations, we have replaced the definition of the term "grantee" with a definition of "recipient" in the final rule. A recipient is the entity that enters into a grant agreement with UMTA. Thus, we have deleted from the final rule the term "grantee" and replaced it in each case with "recipient." If the recipient does not actually carry out a proposed project, but rather passes funds through to some other entity, and the project is major for purposes of this regulation, it remains the responsibility of the recipient to make certain that this regulation is complied with either directly by the recipient or by the entity carrying out the project.

Subpart B—Project management oversight services

Section 633.7 of the NPRM contained all of the provisions relating to PMO services. There were no comments on these provisions. In the final rule, this material is broken down into five sections. New § 633.11 indicates which statutory funding programs are covered by this part. Section 633.13 discusses the timing of the initiation of this program—noting that while UMTA normally will contract for PMO services during the grant application process, it is possible that the agency will determine a project is a major capital project at some later date. The agency then would contract for PMO services at this later time.

Section 633.15 sets out the information access provisions—that the recipient must make records and sites available to UMTA or the PMO contractor.

Section 633.17 states that project management oversight services may be provided by any person or entity. UMTA anticipates that PMO will continue to be carried out by private companies, but it it possible that other entities, such as states, may be used. No recipient can provide PMO services in connection with its own project. Furthermore, the entity carrying out PMO may not have a conflict of interest with regard to the project and would be required to have an objective and unbiased outlook vis a vis the particular project. There also may be instances in which UMTA staff would itself provide all required PMO services. This section also makes it clear that UMTA uses government-wide procurement regulations found at 48 CFR CH I when contracting for PMO services.

Section 633.19 describes the Federal share for a PMO contract—100 percent—and indicates that UMTA is authorized to expend for project management oversight an amount not to exceed one-half of one percent of the funds made available each year under sections 3. 9, and 18 of the UMT Act, as well as under 23 U.S.C. 103(e)(4) and section 14(b) of the National Capital Transportation Amendments of 1979. Under sections 9 and 18, UMTA, as necessary, takes these funds "off the top" of the appropriation before the funds are allocated or apportioned under their particular requirements.

The practice under Section 3 and under the Interstate Transfer provision is somewhat different given the practice by Congress of earmarking those programs. Section 3 by law is divided into separate categories. UMTA takes the PMO ½ of 1 percent from each separate category, rather than directly "off the top". For the New Starts category, Congress fully earmarks projects to be funded. Thus, each earmark may be reduced by ½ of 1 percent to fund PMO activities. Under the Interstate Transfer Program, Congress specifically sets aside funds for PMO activities as part of their earmarks. Thus, the earmarks do not have to be reduced. Of course, if Congress were to change any of its practices discussed above the agency would have to reexamine how it takes down the PMO funds.

Subpart C—Project Management Plans

Old § 633.11, project management plans, has been broken down into two sections to help readability. New § 633.21 provides that, as a condition of Federal financial assistance, a recipient undertaking a major capital project submit a project management plan to UMTA. Two commenters addressed the timing of the submission of the project management plan. One suggested that it should not be required until after a grant is awarded; another proposed that it should be submitted after grant approval.

UMTA recognizes that each project is different, and that establishing absolute procedures without exceptions can be problemmatic in the grants area. The PMP is a dynamic document reflecting the four stages of a project (preliminary engineering, final design, construction, start up). The initial PMP must address subsequent elements of the project—if only in a general way. For example, it may not be possible for a recipient to submit detailed information on its change order procedure at the preliminary engineering stage, even though this is a required element of the plan. Initially, the recipient must address this requirement in general terms. Section 633.27 makes it clear that the recipient must submit periodic updates to the plan, as needed and appropriate.

However, UMTA also believes that the PMP is a key document in determining a recipient's technical capability and capacity to implement a project. Even as early as the grant application stage, a potential recipient needs to have considered how the project will be administered as much as it has defined what actual work and construction needs to be done. In this connection, section 3(a)(2)(A)(i) of the UMT Act states that "[n]o grant * * * shall be provided under this section unless the Secretary determines that the applicant has or will have the technical capacity to carry out the proposed project."

To assist UMTA in making the statutory determination noted above, the final rule provides generally that a project management plan must be submitted during the grant review process and is part of UMTA's grant application review. UMTA recognizes that the due date for such a plan may vary depending on the nature of the major capital project involved, the circumstances surrounding its development, as well as the fact that UMTA may not have even determined that there is a major capital project involved. UMTA will strive to make its determination as early as possible.

In most cases, then, UMTA will notify the recipient of the plan's due date for the final plan during the grant review process. In those cases where the Administrator determines after grant review that a project is major, UMTA will notify the applicant as soon as possible after the determination. The final rule adds a provision (§ 633.21(c)) that the grantee will have at least 90 days from UMTA notification of the

project management plan requirement to the due date of the plan. (Of course, an applicant for a new start or a major rail modernization project knows that it has to prepare a project management plan and may wish to submit it with its grant application to UMTA.)

New § 633.23 provides that UMTA has 60 days from the receipt of a final plan to notify the recipient that the plan is approved or disapproved; that it will require some changes before approval; or indicate that UMTA has not yet completed review of the plan, and state when that review will be completed. Two commenters suggested that the plan be deemed approved if UMTA's review is not complete within the 60 days. UMTA believes that such a provision would not be prudent management on its part. We recognize, however, that action must be taken within 60 days, either in the form of approval or disapproval of the plan, or a statement that UMTA needs more time to review the plan, and the regulation so provides.

Section 663.25, contents of a project management plan, discusses the contents of a project management plan and reflects, as did the provision in the NPRM, the specific requirements of the statute. One commenter suggested that the submission of updated ridership estimates be deleted. This is a statutory requirement, and as such cannot be deleted from the rule.

As noted in the NPRM, section 324 of the Act enumerated specific elements of the plan. The Act also stated, however, that the plan "* * * shall, as required in each case by the Secretary, provide for * * *" the specifically listed elements. The agency believes that the language "as required in each case by the Secretary" provides some discretion to the Administrator in determining the proper contents of each plan. Section 633.29 permits the Administrator, upon application of a grantee or on the Administrator's own initiative, to waive certain requirements upon a clear showing that any of the elements are unnecessary.

In this connection, one commenter suggested a more specific process for obtaining a waiver. In response, the agency does not believe that it would be possible to describe every specific basis for granting a waiver. Waivers will be considered on a case-by-case basis as requested in writing by a recipient. UMTA will grant waivers based on the merits of a specific request, consistent with the underlying purpose of section 23 of the UMT Act.

One commenter suggested that a recipient with an approved project management plan be exempt from submitting a new plan for a new project. The agency believes that it would not be prudent to approve a one-time submission of the project management plan. UMTA needs to verify periodically that the recipient is following the approved plan for a particular project and to monitor its implementation and changes. However, a recipient that manages multiple major capital projects using a plan that has been approved previously by UMTA, may resubmit the document, state that it seeks to execute the proposed project using the same plan, and request a waiver. UMTA will consider granting a waiver from the requirement of a new plan and let the existing plan be used for the new project. If this approach is approved by UMTA and any changes to the old plan are to be made, the recipient need only document those changes.

Section 633.27 discusses implementation of a project management plan after approval by the Administrator, as well as the requirement that a recipient submit periodic updates to the project management plan. Further, the recipient is required to submit monthly data on the project's cost and schedule data. Several commenters suggested that this requirement was too burdensome and duplicative. Section 23 of the UMTA Act specifically includes this requirement and consequently, the agency must include it in the final rule. In any event, the monthly submission of cost and schedule information is data that the recipient should have available and the provision requires the minimum—that the recipient send UMTA a copy of its basic project monitoring data on a monthly basis. Further, this request is not in conflict with the more detailed data required on a quarterly basis.

IV. Regulatory Impacts

A. Significant Rulemaking Analysis

This action has been reviewed under Executive Order 12291, and it has been determined that it is not a major rule. If promulgated, this rule would not result in an annual effect on the economy of $100 million or more, nor would it create a major increase in costs or prices for consumers, individual industries, or geographic regions, nor have significant adverse effects on competition, employment, investment, innovation or the ability of United States-based enterprises to compete in domestic or export markets. Moreover, this regulation is not significant under the Department's Regulatory Policies and Procedures. UMTA finds that economic impact of this regulation is minimal and a full regulatory evaluation is not necessary.

B. Regulatory Flexibility Act

In accordance with 5 U.S.C. 605(b), as added by the Regulatory Flexibility Act, Public Law 95–354, UMTA certifies that this proposed rule, if promulgated, will not have a significant economic impact on a substantial number of small entities within the meaning of the Act.

C. Federalism Analysis

This proposed rule has been reviewed under Executive Order 12612 on "Federalism", and UMTA has determined that it does not have implications for principles of Federalism that warrant the preparation of a Federalism Assessment. If promulgated, this rule will not limit the policymaking and administrative discretion of the States, nor will it affect the States' abilities to discharge traditional State governmental functions or otherwise affect any aspects of State sovereignty.

D. Paperwork Reduction Act

The collection of information requirements in this rule is subject to the Paperwork Reduction Act, Public Law 96–511, 44 U.S.C. Chapter 35. Section 324(e) of the Act specifically requires a grantee constructing a major capital project to prepare a plan and submit it to UMTA for approval. These requirements have been submitted to the Office of Management and Budget (OMB) and have received approval under OMB control number 2132–0502.

List of Subjects in 49 CFR Part 633

Government contracts. Grant programs—Transportation, Mass Transportation.

Accordingly, for the reasons described in the preamble, 49 CFR chapter VI is amended by adding a new part 633, as set forth below:

PART 633—PROJECT MANAGEMENT OVERSIGHT

Sec.

Subpart A—General Provisions

633.1 Purpose.
633.3 Scope.
633.5 Definitions.

Subpart B—Project Management Oversight Services

633.11 Covered projects.
633.13 Initiation of PMO services.
633.15 Access to information.
633.17 PMO contractor eligibility.
633.19 Financing the PMO program.

Subpart C—Project Management Plans

633.21 Basic requirement.
633.23 UMTA review of PMP.

633.25 Contents of a project management plan.
633.27 Implementation of a project management plan.
633.29 PMP waivers.

Authority: 49 U.S.C. 1601 et. seq., 1619.

Subpart A—General Provisions

§ 633.1 Purpose.

This part implements section 324 of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Pub. L. 100–17), which added section 23 to the UMT Act. The part provides for a two-part program for major capital projects receiving assistance from the agency. First, Subpart B discusses project management oversight, designed primarily to aid UMTA in its role of ensuring successful implementation of federally-funded projects. Second, Subpart C discusses the project management plan (PMP) required of all major capital projects. The PMP is designed to enhance the recipient's planning and implementation efforts and to assist UMTA's grant application analysis efforts.

§ 633.3 Scope.

This rule applies to a recipient of Federal financial assistance undertaking a major capital project using funds made available under:

(a) Sections 3, 9, or 18 of the Urban Mass Transportation Act of 1964, as amended;

(b) 23 U.S.C. 103(e)(4); or

(c) Section 14(b) of the National Capital Transportation Amendments of 1979 (93 Stat. 1320, Pub. L. 96–184).

§ 633.5 Definitions.

As used in this part:

Administrator means the Administrator of the Urban Mass Transportation Administration or the Administrator's designee.

Days means calendar days.

Fixed guideway means any public transportation facility which utilizes and occupies a separate right-of-way or rails. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, and exclusive facilities for buses and other high occupancy vehicles.

Full funding agreement means a written agreement between UMTA and a recipient that establishes a financial ceiling with respect to the Government's participation in a project; sets forth the scope of a project; and sets forth the mutual understanding, terms, and conditions relating to the cosntruction and management of a project.

Major capital project means a project that:

(1) Involves the construction of a new fixed guideway or extension of an existing fixed guideway;

(2) Involves the rehabilitation or modernization of an existing fixed guideway with a total project cost in excess of $100 million; or

(3) The Administrator determines is a major capital project because the project management oversight program will benefit specifically the agency or the recipient. Typically, this means a project that:

(i) Generally is expected to have a total project cost in excess of $100 million or more to construct;

(ii) Is not exclusively for the routine acquisition, maintenance, or rehabilitation of vehicles or other rolling stock;

(iii) Involves new technology;

(iv) Is of a unique nature for the recipient; or

(v) Involves a recipient whose past experience indicates to the agency the appropriateness of the extension of this program.

Project management oversight means the monitoring of a major capital project's progress to determine whether a project is on time, within budget, in conformance with design criteria, constructed to approved plans and specifications and is efficiently and effectively implemented.

Project management plan means a written document prepared by a recipient that explicitly defines all tasks necessary to implement a major capital project.

Recipient means a direct recipient of Federal financial assistance from UMTA.

UMT Act means the Urban Mass Transportation Act of 1964, as amended.

UMTA means the Urban Mass Transportation Administration.

Subpart B—Project Management Oversight Services

§ 633.11 Covered projects.

The Administrator may contract for project management oversight services when the following two conditions apply:

(a) The recipient is using funds made available under section 3, 9, or 18 of the Urban Mass Transportation Act of 1964, as amended; 23 U.S.C. 103(e)(4); or section 14(b) of the National Capital Transportation Amendments of 1979; and

(b) The project is a "major capital project".

§ 633.13 Initiation of PMO services.

PMO services will be initiated as soon as it is practicable, once the agency determines this part applies. In most cases, this means that PMO will begin during the preliminary engineering phase of the project. However, consistent with other provisions in this part, the Administrator may determine that a project is a "major capital project" at any point during its implementation. Should this occur, PMO will begin as soon as practicable after this agency determination.

§ 633.15 Access to information.

A recipient of UMTA funds for a major capital project shall provide the Administrator and the PMO contractor chosen under this part access to its records and construction sites, as reasonably may be required.

§ 633.17 PMO contractor eligibility.

(a) Any person or entity may provide project management oversight services in connection with a major capital project, with the following exceptions:

(1) An entity may not provide PMO services for its own project; and

(2) An entity may not provide PMO services for a project if there exists a conflict of interest.

(b) In choosing private sector persons or entities to provide project management oversight services, UMTA uses the procurement requirements in the government-wide procurement regulations, found at 48 CFR CH I.

§ 633.19 Financing the PMO program.

(a) UMTA is authorized to expend up to ½ of 1 percent of the funds made available each fiscal year under sections 3, 9, or 18 of the UMT Act, 23 U.S.C. 103(e)(4), or section 14(b) of the National Capital Transportation Amendments of 1979 (93 Stat. 1320) to contract with any person or entity to provide a project management oversight service in connection with a major capital project as defined in this part.

(b) A contract entered into between UMTA and a person or entity for project management oversight services under this part will provide for the payment by UMTA of 100 percent of the cost of carrying out the contract.

Subpart C—Project Management Plans

§ 633.21 Basic requirement.

(a) If a project meets the definition of major capital project, the recipient shall submit a project management plan prepared in accordance with § 633.25 of this part, as a condition of Federal financial assistance. As a general rule, the PMP must be submitted during the grant review process and is part of UMTA's grant application review. This section applies if:

(1) The project fails under one of the automatic major capital investment project categories (§ 633.5(1) or (2) of this part); or

(2) UMTA makes a determination that a project is a major capital project, consistent with the definition of major capital project in § 633.5. This determination normally will be made during the grant review process. However, UMTA may make such determination after grant approval.

(b)(1) UMTA will notify the recipient when it must submit the PMP. Normally, UMTA will notify the recipient sometime during the grant review process. If UMTA determines the project is major under its discretionary authority after the grant has been approved, UMTA will inform the recipient of its determination as soon as possible.

(2) Once UMTA has notified the recipient that it must submit a plan, the recipient will have a minimum of 90 days to submit the plan.

§ 633.23 UMTA review of PMP.

Within 60 days of receipt of a project management plan, the Administrator will notify the recipient that:

(a) The plan is approved;

(b) The plan is disapproved, including the reasons for the disapproval;

(c) The plan will require modification, as specified, before approval; or

(d) The Administrator has not yet completed review of the plan, and state when it will be reviewed.

§ 633.25 Contents of a project management plan.

At a minimum, a recipient's project management plan shall include—

(a) A description of adequate recipient staff organization, complete with well-defined reporting relationships, statements of functional responsibilities, job descriptions, and job qualifications;

(b) A budget covering the project management organization, appropriate consultants, property acquisition, utility relocation, systems demonstration staff, audits, and such miscellaneous costs as the recipient may be prepared to justify;

(c) A construction schedule;

(d) A document control procedure and recordkeeping system;

(e) A change order procedure which includes a documented, systematic approach to the handling of construction change orders;

(f) A description of organizational structures, management skills, and staffing levels required throughout the construction phase;

(g) Quality control and quality assurance programs which define functions, procedures, and responsibilities for construction and for system installation and integration of system components;

(h) Material testing policies and procedures;

(i) Plan for internal reporting requirements including cost and schedule control procedures; and

(j) Criteria and procedures to be used for testing the operational system or its major components;

§ 633.27 Implementation of a project management plan.

(a) Upon approval of a project management plan by the Administrator the recipient shall begin implementing the plan.

(b) If a recipient must modify an approved project management plan, the recipient shall submit the proposed changes to the Administrator along with an explanation of the need for the changes.

(c) A recipient shall submit periodic updates of the project management plan to the Administrator. Such updates shall include, but not be limited to:

(1) Project budget;

(2) Project schedule;

(3) Financing, both capital and operating;

(4) Ridership estimates, including operating plan; and

(5) Where applicable, the status of local efforts to enhance ridership when estimates are contingent, in part, upon the success of such efforts.

(d) A recipient shall submit current data on a major capital project's budget and schedule to the Administrator on a monthly basis.

§ 633.29 PMP waivers.

A waiver will be considered upon initiation by the grantee or by the agency itself. The Administrator may, on a case-by-case basis, waive:

(a) Any of the PMP elements in § 633.25 of this part if the Administrator determines the element is not necessary for a particular plan; or

(b) The requirement of having a new project management plan submitted for a major capital project if a recipient seeks to manage the major capital project under a previously-approved project management plan.

Issued on: May 28, 1989.

Roland J. Mross,

Deputy Administrator.

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Part VII

Department of Education

Student Literacy Corps Program; Invitation for Applications for New Awards for Fiscal Year 1990; Notice

DEPARTMENT OF EDUCATION

[CFDA No. 84.219]

Student Literacy Corps Program; Invitation for Applications for New Awards for Fiscal Year 1990

Note to Applicants: This notice is a complete application package. Together with the statute authorizing the program and applicable regulations governing the program, including the Education Department General Administrative Regulations (EDGAR), the notice contains information, application forms, and instructions needed to apply for a grant under this competition.

Purpose of Program: To promote student literacy corps projects operated by institutions of higher education (IHEs) where volunteer undergraduates will serve as unpaid literacy tutors in public community agencies.

Deadline for Transmittal of Applications: January 2, 1990.

Deadline for Intergovernmental Review: March 2, 1990.

Available Funds: $5,108,000.

Estimated Range of Awards: Up to $50,000.

Estimated Average Size of Awards: $45,000.

Estimated Number of Awards: 90–110.

Note: The Department is not bound by any estimate in this notice.

Project Period: 24 months.

Applicable Regulations: The Education Department General Administrative Regulations (EDGAR) in 34 CFR part 74 (Administration of Grants to Institutions of Higher Education, Hospitals and Nonprofit Organizations), part 75 (Direct Grant Programs), part 77 (Definitions that Apply to Department Regulations), part 79 (Intergovernmental Review of Department of Education Programs and Activities), and part 85 (Governmentwide Debarment and Suspension (Nonprocurement) and Governmentwide Requirements for Drug-Free Workplace (Grants)).

Description of Program: The Secretary of Education will make two-year non-renewable grants to eligible institutions of higher education to support literacy training at public community agency facilities. No more than $25,000 can be expended by any IHE during the first year. To be eligible to receive a grant, an IHE must demonstrate that it has previously engaged in community service activities. Specifically, it must indicate that it has either used a portion of its allotment under part C of title IV of the Higher Education Act of 1965, as amended (HEA), for work study and community service learning under section 443(b)(2)(A), or conducted a cooperative education program.

Upon request of the IHE, the Secretary may grant a waiver of the prior community service requirement described above if the IHE provides assurances that: (a)(1) it has conducted some other significant program involving community outreach and service; or (2) if it has not conducted such a program, it can demonstrate that it currently has the ability to engage in outreach efforts necessary to carry out Student Literacy Corps requirements; and (b) in the event that it receives an allotment under part C of title IV of the HEA, that a portion of this allotment will be used for community service learning programs.

Each IHE applicant must provide assurances in its application for Student Literacy Corps Program funds that—

(a) Its grant will be used to cover an IHE's costs of participation in the Student Literacy Corps Program for which assistance is sought, including evaluation and stipends for student coordinators, and funds made available will not be used for the payment of stipends or salaries to tutors, in accordance with the USES OF FUNDS provision in the authorizing legislation (20 U.S.C. 1018b);

(b) It will provide literacy tutoring services in structured classroom settings supervised by qualified personnel in one or more public community agencies in the community in which it is located that serve educationally or economically disadvantaged individuals (the term "public community agency" means an established community agency with an established program of instruction such as elementary and secondary schools, Head Start Centers, prisons, agencies serving youth, and agencies serving the handicapped, including disabled veterans);

(c) It will offer one or more courses for academic credit (in such academic areas as the social sciences, economics or education) designed to combine formal study with undergraduates' experience as literacy tutors;

(d) As a condition of receiving credit for the courses of instruction referred to in paragraph (c) above, undergraduates will perform not less than six hours of voluntary, uncompensated service each week of the academic term in a public community agency as tutors in its educational or literacy programs;

(e) The tutoring service referred to in paragraph (d) above will be supplementary both to the IHE's regular academic program and the existing instructional services offered by the community service learning programs; and

(f) It will make arrangements for adequate training of volunteers, depending upon available resources, which may include the training of student coordinators to assist in the process of preparing and placing undergraduates as tutors in community service learning programs.

Selection Criteria:

(a)(1) The Secretary uses the following selection criteria to evaluate applications for new grants under this competition.

(2) The maximum score for all of these criteria is 100 points.

(3) The maximum score for each criterion is indicated in parentheses.

(b) *The criteria.*—(1) *Meeting the purposes of the authorizing statute.* (30 points) The Secretary reviews each application to determine how well the project will meet the purpose of Title I, part D of the Higher Education Act of 1965, as amended, including consideration of—

(i) The objectives of the project; and

(ii) How the objectives of the project further the purposes of Title I, part D of the Higher Education Act of 1965, as amended.

(2) *Extent of need for the project.* (20 points) The Secretary reviews each application to determine the extent to which the project meets specific needs recognized in Title I, part D of the higher Education Act of 1965, as amended, including consideration of—

(i) The needs addressed by the project;

(ii) How the applicant identified those needs;

(iii) How those needs will be met by the project; and

(iv) The benefits to be gained by meeting those needs.

(3) *Plan of operation.* (30 points) The Secretary reviews each application to determine the quality of the plan of operation for the project, including—

(i) The quality of the design of the project;

(ii) The extent to which the plan of management is effective and ensures proper and efficient administration of the project;

(iii) How well the objectives of the project relate to the purpose of the program;

(iv) The quality of the applicant's plan to use its resources and personnel to achieve each objective;

(v) How the applicant will ensure that project participants who are otherwise eligible to participate are selected without regard to race, color, national origin, gender, age, or handicapping condition; and

(vi) For grants under a program that requires the applicant to provide an opportunity for participation of students enrolled in private schools, the quality of the applicant's plan to provide that opportunity.

(4) *Quality of key personnel.* (7 points)

(i) The Secretary reviews each application to determine the quality of key personnel the applicant plans to use on the project, including—

(A) The qualifications of the project director (if one is to be used);

(B) The qualifications of each of the other key personnel to be used in the project;

(C) The time that each person referred to in paragraph (b)(4)(i) (A) and (B) will commit to the project; and

(D) How the applicant, as part of its nondiscriminatory employment practices, will ensure that its personnel are selected for employment without regard to race, color, national origin, gender, age, or handicapping condition.

(ii) To determine personnel qualifications under paragraphs (b)(4)(i) (A) and (B), the Secretary considers—

(A) Experience and training in fields related to the objectives of the project; and

(B) Any other qualifications that pertain to the quality of the project.

(5) *Budget and cost effectiveness.* (5 points) The Secretary reviews each application to determine the extent to which—

(i) The budget is adequate to support the project; and

(ii) Costs are reasonable in relation to the objectives of the project.

(6) *Evaluation plan.* (5 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—

(i) Are appropriate to the project; and

(ii) To the extent possible, are objective and produce data that are quantifiable.

(Cross-reference: See 34 CFR 75.590 Evaluation by the grantee.)

(7) *Adequacy of resources.* (3 points) The Secretary reviews each application to determine the adequacy of the resources that the applicant plans to devote to the project, including facilities, equipment, and supplies.

Intergovernmental Review of Federal Programs

This program is subject to the requirements of Executive Order 12372 (Intergovernmental Review of Federal Programs) and the regulations in 34 CFR Part 79.

The objective of the Executive order is to foster an intergovernmental partnership and to strengthen federalism by relying on State and local processes for State and local government coordination and review of proposed Federal financial assistance.

Applicants must contact the appropriate State Single Point of Contact to find out about, and to comply with, the State's process under Executive Order 12372. Applicants proposing to perform activities in more than one State should immediately contact the Single Point of Contact for each of those States and follow the procedure established in each State under the Executive order. If you want to know the name and address of any State Single Point of Contact, see the list published in the **Federal Register** on November 18, 1987, pages 44338–44340.

In States that have not established a process or chosen a program for review, State, areawide, regional, and local entities may submit comments directly to the Department.

Any State Process Recommendation and other comments submitted by a State Single Point of Contact and any comments from State, areawide, regional, and local entities must be mailed or hand-delivered by the date indicated in this notice to the following address: The Secretary, E.O. 12372—CFDA # 84.219, U.S. Department of Education, Room 4161, 400 Maryland Avenue, SW., Washington, DC 20202–0125.

Proof of mailing will be determined on the same basis as applications (see 34 CFR 75.102). Recommendations or comments may be hand-delivered until 4:30 p.m. (Washington, DC time) on the date indicated in this notice.

Please note that this address is not the same address as the one to which the applicant submits its completed application. Do not send application to the above address.

Instructions for Transmittal of Applications

(a) If an applicant wants to apply for a grant, the applicant shall—

(1) Mail the original and two copies of the application on or before the deadline date to: U.S. Department of Education, Application Control Center, Attention: (CFDA # 84.219), Washington, DC 20202–4725.

or

(2) Hand deliver the original and two copies of the application by 4:30 p.m. (Washington, DC time) on the deadline date to: U.S. Department of Education, Application Control Center, Attention: (CFDA # 84.219), Room # 3633, Regional Office Building # 3, 7th and D Streets, SW., Washington, DC.

(b) An applicant must show one of the following as proof of mailing:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary.

(c) If an application is mailed through the U.S. Posal Service, the Secretary does not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

Notes: (1) The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, an applicant should check with its local post office.

(2) An applicant wishing to know that its application has been received by the Department must include with the application a stamped, self-addressed postcard containing the CFDA number and title of this program.

(3) The applicant must indicate on the envelope and—if not provided by the Department—in Item 10 of the Application for Federal Assistance (Standard Form 424) the CFDA number—and letter, if any—of the competition under which the application is being submitted.

Application Instructions and Forms

The appendix to this application is divided into three parts plus a statement regarding estimated public reporting burden and various assurances and certifications. These parts and additional materials are organized in the same manner that the submitted application should be organized. The parts and additional materials are as follows:

Part I: Application for Federal Assistance (Standard Form 424 (Rev. 4–88)) and instructions.

Part II: Budget Information—Non-Construction Programs (Standard Form 424A) and instructions.

Part III: Application Narrative.

Additional Materials:

Estimated Public Reporting Burden.

Assurances—Non-Construction Programs (Standard Form 424B).

Certification regarding Debarment, Suspension, and Other Responsibility Matters: Primary Covered Transactions (ED Form GCS–008) and instructions.

Certification regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion: Lower Tier Covered Transactions (ED Form GCS–009) and instructions. (**Note:** ED Form GCS–009 is intended for the use of grantees and

should not be transmitted to the Department.)

Certification Regarding Drug-Free Workplace Requirements: Grantees, Other than Individuals (ED 80-0004).

An applicant may submit information on a photostatic copy of the application and budget forms, the assurances, and the certifications. However, the application form, the assurances, and the certifications must each have an original signature. No grant may be awarded unless a completed application form has been received.

FOR FURTHER INFORMATION CONTACT: Dr. Donald N. Bigelow, Office of Higher Education Programs, U.S. Department of Education, Room 3082, (202) 732-5596, ROB-3, Mail Station 5131, 400 Maryland Avenue, SW., Washington, DC 20202.

Program Authority: 20 U.S.C. 1018-1018f.

Dated: August 28, 1989.

James B. Williams,

Acting Assistant Secretary for Postsecondary Education.

BILLING CODE 4000-01-M

Appendix

APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: *Application* ☐ Construction ☐ Non-Construction; *Preapplication* ☐ Construction ☐ Non-Construction	2. DATE SUBMITTED	Applicant Identifier
	3. DATE RECEIVED BY STATE	State Application Identifier
	4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

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

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: 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.

Item: Entry:

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.)

BUDGET INFORMATION — Non-Construction Programs

OMB Approval No. 0348-0044

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 (1)	(2)	(3)	(4)	Total (5)
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	$	$	$	$	$

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Standard Form 424A (4-88)
Prescribed by OMB Circular A-102

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 to *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).

Lines 1-4, Columns (c) through (g.) (continued)

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 of 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.

INSTRUCTIONS FOR THE SF-424A *(continued)*

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.

Instruction for Part III—Application Narrative

Before preparing the Application Narrative, an applicant should read carefully the description of the program and the selection criteria the Secretary uses to evaluate applications.

The Narrative should encompass each function or activity for which funds are being requested and should—

1. Begin with an Abstract; that is, a single page summary of the proposed project;

2. Describe the project in terms of each of the selection criteria in the order in which they are listed; and

3. Include in the Narrative, information that will assist the Secretary in reviewing the application by indicating as fully as possible how the relevant "assurances" (a) to (f) in the Description of the Program will be carried out. Clearly describe the course(s) to be offered, the related training for undergraduate tutors and the duties of student coordinators, if any; explain which community agencies will be cooperating and why, with information about their programs and their clients; finally, describe the management and logistics of the proposed project, whether or not it is new, and, if it is new, how it will be combined with pre-existing projects.

Please limit the Application Narrative to no more than 15 double-spaced, typed pages (on one side only).

Estimated Public Reporting Burden

Under terms of the Paperwork Reduction Act of 1980, as amended, and the regulations implementing that Act, the Department of Education invites comment on the public reporting burden in this collection of information. Public reporting burden for this collection of information is estimated to average four hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. You may send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, Information Management and Compliance Division, Washington, DC 20202–4651; and to the Office of Management and Budget, Paperwork Reduction Project 1840–0618, Washington, DC 20503.

(Information collection approved under OMB control number 1840–0618. Expiration date: 3/31/1992.)

BILLING CODE 4000-01-M

Student Literacy Corps Program
Program Assurances

As the duly authorized representative of the IHE applicant, I certify that the applicant will comply with all statutory and regulatory requirements applicable to this program and provide specific program assurances that:

a. Its grant will be used to cover an IHE's costs of participation in the Student Literacy Corps Program for which assistance is sought, including evaluation and stipends for student coordinators, and funds made available will not be used for the payment of stipends or salaries to tutors, in accordance with the USES OF FUNDS provision in the authorizing legislation (20 U.S.C. 1018b);

b. It will provide literacy tutoring services in structured classroom settings supervised by qualified personnel in one or more public community agencies in the community in which it is located which serve educationally or economically disadvantaged individuals (the term "public community agency" means an established community agency with an established program of instruction such as elementary and secondary schools, Head Start Centers, prisons, agencies serving youth, and agencies serving the handicapped, including disabled veterans).

c. It will offer one or more courses for academic credit (in such academic areas as the social sciences, economics or education) designed to combine formal study with undergraduates' experience as literacy tutors;

d. As a condition of receiving credit for the courses of instruction referred to in paragraph (c) above, undergraduates will perform not less than six hours or voluntary, uncompensated service each week of the academic term in a public community agency as tutors in its educational or literacy programs;

e. The tutoring service referred to in paragraph (d) above will be supplementary both to the IHE's regular academic program and the existing instructional services offered by the community service learning programs; and

f. It will make arrangements for adequate training of volunteers, depending upon available resources, which may include the training of student coordinators to assist in the process of preparing and placing undergraduate as tutors in community service learning programs.

Signature or Authorized Certifying Official	Title
Applicant Organization	Date Submitted

OMB Approval No. 0348-0040

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.

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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 andto 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	TITLE
APPLICANT ORGANIZATION	DATE SUBMITTED

SF 424B (4-88) Back

Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the U.S. Department of Education, Grants and Contracts Service, 400 Maryland Avenue, S.W. (Room 3633 GSA Regional Office Building No. 3), Washington, D.C. 20202-4725, telephone (202) 732-2505.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

(1) The prospective primary participant 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 covered transactions by any Federal department or agency;

(b) Have not within a three-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 for 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 three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name PR/Award Number or Project Name

Name and Title of Authorized Representative

Signature Date

ED Form GCS-008, (REV.12/88)

Instructions for Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's 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.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion--Lower Tier Covered Transactions," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the person to which this proposal is submitted.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name PR/Award Number or Project Name

Name and Title of Authorized Representative

Signature Date

ED Form GCS-009, (REV. 12/88)

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "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.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Drug-Free Workplace Requirements Grantees Other Than Individuals

This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 34 CFR Part 85, Subpart F. The regulations, published in the January 31, 1989 Federal Register, require certification by grantees, prior to award, 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 agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or governmentwide suspension or debarment (see 34 CFR Part 85, Sections 85.615 and 85.620).

The grantee certifies that it will 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 a 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 of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;

(e) Notifying the agency within ten days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction;

(f) Taking one of the following actions, within 30 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; 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).

Organization Name PR/Award Number or Project Name

Name and Title of Authorized Representative

Signature Date

ED 80-0004

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Federal Register

Friday
September 1, 1989

Part VIII

Department of Health and Human Services

Health Care Financing Administration

42 CFR Part 405, et al.

Medicare Program; Medicare Coverage of Screening Mammography; Proposed Rule

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Parts 405, 410, 413, and 494

[BERC-619-P]

RIN 0938-AD88

Medicare Program; Medicare Coverage of Screening Mammography

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Proposed rule.

SUMMARY: This proposed rule would implement section 204 of the Medicare Catastrophic Coverage Act of 1988, which provides limited coverage for screening mammography services. The rule would amend current Medicare regulations to set forth payment limitations and conditions for coverage of screening mammography. The conditions would consist of quality standards to assure the safety and accuracy of screening mammography services performed by qualified physicians and other suppliers of these services.

DATE: To be considered, comments must be mailed or delivered to the appropriate address, as provided below, and must be received by 5:00 p.m. on October 31, 1989.

ADDRESSES: Mail comments to the following address:

Health Care Financing Administration, Department of Health and Human Services, Attention: BERC-619-P, P.O. Box 26676, Baltimore, Maryland 21207.

If you prefer, you may deliver your comments to one of the following addresses:

Room 309-G, Hubert H. Humphrey Building, 200 Independence Ave., SW., Washington, DC, or,

Room 132, East High Rise Building, 6325 Security Boulevard, Baltimore, Maryland.

Due to staffing and resource limitations, we cannot accept facsimile (FAX) copies of comments.

If comments concern information collection or recordkeeping requirements, please address a copy of comments to:

Office of Management and Budget, Office of Information and Regulatory Affairs, Room 3206, New Executive Office Building, Washington, DC 20503, Attention: Allison Herron.

In commenting, please refer to file code BERC-619-P. Comments received timely will be available for public inspection as they are received, beginning approximately three weeks after publication of this document, in Room 309-G of the Department's offices at 200 Independence Ave., SW., Washington, DC, on Monday through Friday of each week from 8:30 a.m. to 5:00 p.m. (phone: 202-245-7890).

FOR FURTHER INFORMATION CONTACT:

William Larson (Conditions for Coverage) (301) 966-4640

William Morse (Payment Limits) (301) 966-4520

SUPPLEMENTARY INFORMATION:

I. Background

Section 1862(a) of the Social Security Act (the Act) lists items and services excluded from Medicare coverage. Paragraph (a)(7) of that section identifies routine physical checkups as excluded services, and it is on this basis that screening mammography has been excluded from Medicare coverage. This policy is reflected in Medicare regulations at 42 CFR 405.310(a), which implement the statute by excluding coverage for routine physical checkups. In addition, current coverage instructions setting forth the routine physical checkup exclusion are found in the Medicare Carriers Manual (HCFA Pub. 14), the part A Intermediary Manual (HCFA Pub. 13), the Hospital Manual (HCFA Pub. 10), the Skilled Nursing Facility Manual (HCFA Pub. 12), and the Home Health Agency Manual (HCFA Pub. 11). Current coverage instructions on payment for diagnostic mammograms (as distinguished from screening mammograms) are included in section 50-21 of the Medicare Coverage Issues Manual (HCFA Pub. 6).

Section 204 of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100-360, enacted on July 1, 1988) amended sections 1833, 1834, 1861, 1862, 1863, 1864, 1865, 1902, and 1915 of the Act to provide coverage of screening mammography (including a physician's interpretation of the images or films produced by the radiologic procedure) effective January 1, 1990, subject to frequency limitations, quality standards, and special payment rules.

In the legislative history of Public Law 100-360, Congress expressed strong concern that steps be taken to ensure the quality of screening mammography services. In the opening statement of the hearing on Medicare coverage for mammography, Representative Fortney H. Stark said, "To assure that Medicare beneficiaries receive the highest quality of care, my bill requires the Secretary to establish conditions of participation for facilities offering mammography procedures" (Report of the Subcommittee on Health of the Committee on Ways and Means, House of Representatives, H.R. Rep. No. 100-47, 100th Congress, 1st Session 7 (1987)). In testimony before the committee, other individuals and professional organizations in the health care community (the American College of Radiology, the American Cancer Society, and the National Women's Health Network, among others) also expressed concern regarding the quality of mammography services. For example, Alan C. Sartorelli, Ph.D., Alfred Gilman Professor of Pharmacology and Director of the Yale Comprehensive Cancer Center of the Yale University School of Medicine, and also President of the Association of American Cancer Institutes, testified that in constructing a Medicare screening mammography program that will be successful in the early detection of breast cancer, "* * * it is critical that quality control of the examinations be included". At the request of the Congress, the Office of Technology Assessment (OTA) published a report on the subject ("Breast Cancer Screening for Medicare Beneficiaries: Effectiveness, Costs to Medicare and Medical Resources Required", p. 11, November 1987). In this report, OTA identifies "the need to monitor the quality of screening service * * * if Medicare expects to restrict the amount to be reimbursed to providers of screening services", and says that "the rapid rise in new freestanding breast screening facilities is likely to raise concerns about the quality of the services provided" (p. 12). This concern about the quality of screening mammography has been strengthened by the May 1989 report of the U.S. Preventive Services Task Force to the Secretary, entitled "Guide to Clinical Preventive Services". Citing four studies, it concluded that, "Wide variation is found in the quality and consistency of mammography, as well as in the accuracy of interpretation, radiation exposure and cost" (p. 29).

In response to this concern for the quality of screening mammography services, as well as to the congressional mandate for quality standards contained in section 1834(e)(3) of the Act, we are proposing comprehensive standards regarding equipment specifications, the qualifications of supervising and interpreting physicians and other personnel, safety measures, compliance with Federal, State, and local laws and regulations, the preservation and disposition of examination results and other records, and the need for an ongoing equipment quality assurance program.

We recognize that this approach to assuring the quality of screening mammography is not entirely consistent with our recent emphasis on using "outcome" or "performance" standards to assure the quality of provider services paid for under the Medicare program. Such as approach would be desirable in the screening mammography area, but it does not appear to be feasible at this time. An outcome oriented approach requires that certain methodologies such as a valid proficiency test be available to evaluate how well the goals established by regulation are being met. Some progress has been made in the development of a proficiency test for the performance of screening mammography examinations, primarily in the use of phantoms to evaluate the quality of the images being produced and in the development of other physics tests. However, we do not yet have a test for technologist positioning accuracy or for radiologist interpretative skills. Neither do we have a carefully evaluated clinical comparison for the physics tests now in use. Some research, sponsored by the Centers for Disease Control (CDC) and the Food and Drug Administration (FDA), is now under way that may contribute to the development of some of the missing elements. This research and efforts by professional groups may eventually lead to a comprehensive valid proficiency test that will permit use of an outcome oriented approach in screening mammography. For the present, however, we believe that it will be necessary to require facilities to meet specific requirements that are known to contribute to effective mammography examinations and their interpretations. The proposed standards reflect this approach. However, we request comments on the availability and accuracy of proficiency testing for the elements noted above.

II. Provisions of the Regulations

This proposed rule would implement section 204 of Public Law 100–360 by setting forth payment limitations and establishing conditions for coverage of screening mammography to ensure the safety and accuracy of the screening process.

Thus, we would specify an exception to the list of examples of routine physical checkups excluded from coverage at 42 CFR 405.310(a)(1). The exception would be for screening mammography (including a physician's interpretation of the results) that is consistent with the payment requirements proposed at § 410.34 and that meets the conditions for coverage that we would specify under subpart B of a new 42 CFR part 494.

Coverage of screening mammography would be provided under Medicare Part B only; a reasonable interpretation of the law does not support Part A coverage of the procedure.

A. Payment Limitations

We would add a new § 405.534 to set forth limitations on payment for screening mammography services. There would be three categories of billing for mammography services, as is the case with other radiological services. Bills may be for the professional component of mammography services (that is, for the physician's interpretation of the results of the examination), for the technical component (all other services), or for both (global). This new section would establish payment limits for each of those categories. For purposes of payment for screening mammography services, we propose to weight the professional and technical components in the same manner that we did in establishing fee schedules for radiologists' services that were published in the **Federal Register** on March 2, 1989 (54 FR 8994–9024). Thus, we propose that, at this time, the professional component would represent 37 percent of the total amount for the complete service and the technical component would represent 63 percent. If the relationship between these values changes at a later date, we would modify § 405.534 to reflect the change.

Billing for screening mammography services would be in accordance with general Medicare payment policy for radiology services furnished by physicians in providers (§§ 405.554 through 405.555) and with policy governing payment under the fee schedule for radiologist services furnished in all settings (§§ 405.530 through 405.533). That is, a global charge may be made for services furnished in settings other than hospitals or the technical and professional components may be billed separately. However, global billing is not permitted for services furnished in hospital outpatient departments. Furthermore, the technical component of screening mammography services furnished in hospital outpatient departments would not be paid through the special methodology set forth in § 413.122, which is the generally applicable policy for payment of hospital outpatient radiology services. We propose that screening mammography services be excluded from the provision. Proposed payment for these services is discussed below.

Section 405.534(a) would set the limitations for payment of both the professional and technical components through global billing for services furnished in all settings. As discussed above, global fees may not be billed for screening mammography services furnished in hospitals. For screening mammography services furnished in all settings when a global charge is appropriate, the amount of payment subject to the deductible would be equal to 80 percent of the least of the—

- Actual charge for the service;
- Amount determined with respect to the professional and technical components for the service under §§ 405.530 through 405.533, which set forth the methodology for computing payments for radiologist services; or
- Limit for the procedure. For services furnished in calendar year 1990, the limit would be $50. On January 1 of each subsequent year, the limit would be updated by the percentage increase in the Medicare Economic Index (MEI).

In paragraph (b) of proposed § 405.534, we would set forth the limits for payment of the professional component. For services furnished in all settings in which the professional component is billed separately, the amount of payment for that professional component subject to the deductible would be equal to 80 percent of the least of the—

- Actual charge for the professional component of the service;
- Amount determined with respect to the professional component for the service under §§ 405.530 through 405.533, which set forth the methodology for computing payments for radiologist services; or
- Professional portion of the screening mammography limit. This amount is determined by multiplying the screening mammography limit (that is, $50 in calendar year 1990) by the same percentage that the professional relative value for screening mammography bears to the global relative value for screening mammography under §§ 405.530 through 405.533, or 37 percent. On January 1 of each subsequent year, the screening mammography limit would be updated by the percentage increase in the MEI.

In paragraph (c) of the proposed § 405.534, we would set forth the limitations for payment of the technical component. We propose the following:

- For services furnished in all settings in which the technical component is billed separately, the limit for that technical component subject to the deductible would be equal to 80 percent of the least of the—

—Actual charge for the technical component of the service;

—Amount determined with respect to the technical component for the service under §§ 405.530 through 405.533; or

—Technical portion of the screening mammography limit. This amount is determined by multiplying the screening mammography limit (that is, $50 in calendar year 1990) by the same percentage that the technical relative value for screening mammography bears to the global relative value for screening mammography under §§ 405.530 through 405.533, or 63 percent. On January 1 of each subsequent year, the overall limit would be updated by the percentage increase in the MEI.

• For services furnished in the outpatient departments of hospitals, the limit for that technical component subject to the deductible would be the same as described above.

We would also add a new § 405.535 to stipulate that, if screening mammography services are furnished to a beneficiary by a nonparticipating physician or supplier, a special limiting charge applies to the charges made to the beneficiary. The limiting charge would be the lesser of the amount determined using § 405.533 (rules for nonparticipating physicians furnishing radiology services) or the limit for nonparticipating suppliers set forth in section 204 of Public Law 100–360. In 1990, this limit would be 125 percent of the payment limit; in 1991, 120 percent; and, beginning January 1, 1992, 115 percent of the payment limit.

B. Coverage Limitations and Conditions

We would revise § 410.1(a), which sets forth the statutory basis for part B benefits, by adding section 1834 of the Act. Section 1834 provides for part B coverage of screening mammography services. We would revise § 410.10 to add a paragraph (t) reading "Screening mammography services". This would add screening mammography services to the listing of "medical and other health services" that part B covers.

We would redesignate the current § 410.34 as § 410.35. The new § 410.34 would set forth conditions for coverage for and limitations on coverage for screening mammography services. It would define screening mammography as a radiologic procedure furnished to a woman for the purpose of early detection of breast cancer, including a physician's interpretation of the results of the procedure. Section 410.34(a) would explicitly state that coverage is available for screening mammography services only if furnished by a screening mammography supplier that meets the conditions for coverage of screening mammography proposed in subpart B of part 494.

According to the Report of the Committee of Conference that accompanied Public Law 100–360 (H.R. Rep. No. 100–661, 100th Congress, 2d Session 171 (1988)), the conferees "understand that a bilateral four-view procedure is currently considered to be the standard of care in the United States for screening mammography * * * [and] therefore anticipate that this would be initially included in the quality standards to be developed by the Secretary as a requirement for coverage". Accordingly, § 410.34(b)(1) would specify that the service must be a bilateral four-view exposure (that is, a cranio-caudal and a medial lateral oblique view of each breast) furnished by a supplier that meets the conditions for coverage of screening mammography services.

Additionally, § 410.34 would set forth the following restrictions imposed by section 1834(e)(2) of the Act:

• No payment may be made for screening mammography performed on an asymptomatic woman under 35 years of age (§ 410.34(b)(2)).

• Payment may be made for only 1 screening mammography performed on an asymptomatic woman over 34 years of age, but under 40 years of age (§ 410.34(b)(3)).

• For an asymptomatic woman over 39 years of age, but under 50 years of age, the following coverage guidelines apply:

—Payment may be made for a screening mammography performed after at least 11 months have passed since the last screening mammography, if the woman has a high risk of developing breast cancer, that is, if she has—

—A personal history of breast cancer;

—A personal history of biopsy-proven benign breast disease;

—A mother, sister, or daughter who has had breast cancer; or

—Not given birth prior to age 30.

—Payment may not be made for a screening mammography performed within the 23 months after the previous screening mammography if the above criteria do not apply (that is, the woman is not at a high risk of developing breast cancer) (§ 410.34(b)(4)).

• For an asymptomatic woman over 49 years of age, but under 65 years of age, payment may not be made for screening mammography performed within 11 months after a previous screening mammography (§ 410.34(b)(5)).

• For an asymptomatic woman over 64 years of age, payment may not be made for screening mammography performed within 23 months after a previous screening mammography (§ 410.34(b)(6)).

These proposed guidelines reflect the mandated provisions of the law, except that the factors indicating a high risk of developing breast cancer were identified based upon advice we received from the National Cancer Institute of the National Institutes of Health. The proposed guidelines do not include a requirement that the screen mammography radiologic procedure (as distinguished from the physician's interpretation) must be prescribed by a physician for a particular beneficiary in order for it to be covered under the benefit. The law does not specify it, and the legislative history is also silent as to the need for physician referral. As provided in section 1834(e)(2)(B) of the Act, added by section 204(b)(2) of Public Law 100–360, the guidelines may be revised by the Secretary on the basis of consultation with the National Cancer Institute, but not before January 1, 1992.

We intend to publish a separate regulation concerning current payment methods for hospital outpatient radiology services and other diagnostic procedures. We are proposing to exclude screening mammography services as described in § 410.34 from those payment methods.

We would add a new § 413.123 that would specify the payment method for screening mammography performed by hospitals on an outpatient basis.

We would add a new Part 494 entitled "Conditions for Coverage of Particular Services". Subpart A would be reserved for future use as "General Provisions", and Subpart B would specify "Conditions for Coverage of Screening Mammography". In proposing the conditions for coverage of screening mammography, we used part 405, subpart N (Conditions for Coverage of Portable X-ray Services) as a model. Because of the similarity of services furnished and based on our experience with the portable X-ray benefit, we believe that some of the conditions for coverage of portable X-ray services furnish a sound basis upon which to develop similar conditions for coverage of screening mammography. The first condition for coverage under subpart B would be a general condition at § 494.50. It would provide that in order to be approved for participation in the Medicare program, a supplier of screening mammography must meet all the conditions set forth in subpart B with respect to individuals entitled to Medicare part B. Section 1834(e)(3) of the Act authorizes the Secretary to

establish safety and accuracy standards "under this Part", that is, under Medicare part B. All facilities (including participating providers) would have to meet all the safety and accuracy standards specified in the proposed regulations to qualify as screening mammography suppliers. Medicare participating hospitals, for instance, would not be considered to meet the proposed requirements solely because they are certified as participating providers. The second condition for coverage would be located at § 494.51. Using language similar to that used in § 405.1411 of subpart N, we would require compliance with Federal, State, and local laws and regulations by the supplier of screening mammography services. (Section 405.1411 requires compliance with Federal, State, and local laws as a condition for coverage of portable X-ray services.)

At a new § 494.52, we would establish a condition requiring supervision by a qualified physician. The language we would use is similar to that used in § 405.1412(a), which sets forth a physician supervision standard for coverage for portable X-ray services. We would establish a standard at § 494.52(a) to require that the screening mammography services must be supervised by a physician. Additionally, section 494.52(a), using language similar to that used in § 405.1412(b), would set forth the required qualifications of the physician supervisor. The new section would state that he or she must be a licensed doctor of medicine or licensed doctor of osteopathy who meets the requirements for the interpretation of the results of screening mammograms as specified in § 494.54. We would consider adequate supervision to be provided if the supervising physician meets the requirement proposed at § 494.52(b). Specifically, the supervising physician must certify annually that he or she has checked the procedural manuals and has observed monthly the operators' performance, that he or she has verified that the equipment and personnel meet applicable Federal, State, and local licensure and registration requirements, that safe operating procedures are used, and that all other requirements of part 494, subpart B are being met.

We would add a new § 494.54 to set forth the requirements governing the interpretation of the results (that is, films or images) of screening mammography as a condition for Medicare coverage, in accordance with section 1834(e)(3)(C) of the Act. This section of the Act requires that mammography results be interpreted by either a physician "who is certified as qualified to interpret radiological procedures by such an appropriate board as the Secretary specifies" or "who is certified as qualified to interpret screening mammography procedures by such a program as the Secretary recognizes in regulation, as assuring the qualifications of the individual with respect to such interpretation". Thus, under § 494.54(a), we would require that the results of all screening mammography be interpreted by a physician who meets either of the following certification requirements that we developed as a result of consultation with the FDA, the American College of Radiology (ACR), and the National Cancer Institute (NCI):

- The interpreting physician is certified by the American Board of Radiology or by the American Osteophathic Board of Radiology (§ 494.54(a)(1)).
- The interpreting physician is certified as qualified to interpret the results of a screening mammography procedures by an appropriate program that assures the qualifications of the individual (§ 494.54(a)(2)).

We are specifically soliciting suggestions from the public concerning alternate sources of certification or other appropriate programs that may be used to meet this requirement, and we will revise proposed § 494.54(a)(2), as appropriate, based on those comments.

Additionally, on the basis of consultation with the FDA, ACR, and NCI, we would require in § 494.54(b) that the interpreting physician meet certain experience and continuing education standards to ensure that the special skills required to interpret the results (that is, films or images) of screening mammography accurately are kept up-to-date. The results of a screening mammography procedure are very difficult to interpret accurately and require a physician's special skills. These skills need to be kept up-to-date through special training and experience that is recognized by the ACR in its own accreditation program. We understand that neither certification by the American Board of Radiology nor by the American Osteopathic Board of Radiology includes any assurance that interpreting physicians are keeping their skills up-to-date through continuing training and experience. The experience and continuing education standards we would require in § 494.54(b) follow:

- A physician first meeting the board certification standards or meeting other equivalent certification qualifications as outlined above before January 1, 1990 must also—
  - —Have read the results of an average of 10 or more screening or diagnostic mammographies per work week in the 6 months prior to January 1, 1990 (the effective date of the final rule);
  - —Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation in the 24 months prior to January 1, 1990; and
  - —Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation every 24 months after January 1, 1990.
  - —Continued to read the results of an average of 10 or more screening or diagnostic mammographies per work week after he or she begins to read screening mammographies for Medicare beneficiaries.
- A physician first meeting the board certification standards or meeting other equivalent certification qualifications as outlined above on or after January 1, 1990, must also—
  - —Have read the results of an average of 10 or more screening or diagnostic mammographies per work week in the 6 months before the date that he or she begins reading screening mammographies for Medicare beneficiaries;
  - —Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation in the 24 months before the date he or she begins reading screening mammographies for Medicare beneficiaries; and
  - —Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation every 24 months after the date that he or she begins reading screening mammographies for Medicare beneficiaries.
  - —Continue to read an average of 10 or more screening or diagnostic mammographies per work week after he or she begins reading screening mammographies for Medicare beneficiaries.

We are interested in receiving comments regarding the appropriateness of these training and experience requirements.

Section 494.54(c) would require that the interpreting physician prepare and sign a written report on his or her interpretation of the results (that is, the images or films) of the screening mammography procedure and that a copy of that report and the original images or films be forwarded to the patient's screening mammography supplier for inclusion in the patient's

medical records. It would also require that the interpreting physician provide a written statement to the patient, in terms easily understood by a lay person. The statement would describe the importance of the screening mammography procedure to her ongoing health (including a description of the steps that should be taken if the results of the mammography procedure are positive), as well as her responsibility to share with any new physician or supplier of her next screening mammography, the date and place of her previous screening mammography. The statement must record the date of the procedure, the name of the facility providing the procedure, the physician (if any) to whom the woman wants a copy to be sent, and must indicate that the original images or films have been provided to the screening mammography supplier for inclusion in the woman's permanent medical record. This proposed requirement was also included as a result of our meetings with representatives of the FDA and the ACR.

We would add a new § 494.56 to set forth requirements concerning qualifications and orientation of technical personnel and the retention of employee records. Paragraphs (a) and (b) of this section were modeled after similar requirements at § 405.1413 concerning the conditions for coverage of portable X-ray services. Paragraph (a) would require that all operators of screening mammography equipment be licensed by the State to perform radiological procedures or, in States that have no licensing requirements, be certified in radiography by the American Registry of Radiologic Technologists, the American Registry of Clinical Radiographic Technologists, or possess equivalent certification qualifications.

In addition, on the basis of consultation with the FDA and ACR, we would require that all operators of screening mammography equipment meet certain formal and specialized training standards to ensure that a high level of quality is achieved in producing the results (that is, films or images) of the radiologic procedure. State licensure or other certificates in radiography normally mean that operators are only generally qualified to perform radiological procedures and not that they are specifically trained to perform screening mammography procedures that are especially difficult to do correctly. Accordingly, the operators would be required to successfully complete a program of not less than 24 months of formal training in X-ray technology in a school that meets the requirements of Appendix A (Standards for Accreditation of Educational Programs for Radiographers) of 42 CFR Part 75, or that is approved by the Council on Allied Health Education and Accreditation. Also, they would have to have successfully completed specialized training in mammographic positioning, compression, and technique factor settings in the 24 months prior to January 1, 1990 (or in the 24 months preceding the time he or she begins performing mammographies for Medicare beneficiaries), and every 24 months thereafter.

Paragraph (b) of proposed § 494.56 would require that a supplier of screening mammography services have an orientation program for operators based on a procedural manual that is available to all staff members and that includes instructions in all of the following areas:

- Precautions to protect the following individuals from unnecessary exposure to radiation—

—Patients;
—Individuals supporting a patient during a mammography procedure;
—Other individuals in the surrounding environment; and
—The operator of the screening mammography equipment.

- Determination of the area that will receive the primary beam (breast positioning).
- Pertinent information on compression, exposure levels, resolution, contrast, noise, examination identification, artifacts, and average glandular dose per view.
- Employee responsibilities concerning the proper use of personal radiation monitors.
- Proper use and maintenance of equipment, including a discussion of the image receptors appropriate for use with mammography and the kV(kilovoltage)-target-filter combination to be used with each image receptor.
- Proper maintenance of records.
- Possible technical problems and solutions.
- Protection against electrical hazards.
- Hazards of excessive exposure to radiation.

Paragraph (c) of § 494.56 provides alternative qualification criteria for people who furnish diagnostic X-ray physics support. The primary criteria are contained in (c)(1), which would require that those who furnish diagnostic X-ray physics support be certified by the American Board of Radiology as diagnostic medical physicists or possess qualifications that are recognized by the Secretary as equivalent to those required for certification. We are soliciting suggestions from the public for alternate sources of certification or registration for meeting this requirement. After consulting with the FDA, the ACR, and other health care organizations, we concluded that adoption of this certification requirement would be the best way to ensure that these individuals would be qualified to maintain a satisfactory quality assurance program. We were advised that the person furnishing diagnostic X-ray physics support is the technical expert with the overall responsibility of assuring that mammography equipment performance is consistently on the level required by the quality standards. He or she is a recognized expert in the physics involved in the operation of mammography equipment and the techniques used in monitoring equipment performance, and is capable of evaluating the monitoring results. Furthermore, he or she is specially qualified to carry out corrective actions as needed to ensure that the equipment continues to operate properly. Under this proposed rule, the person furnishing diagnostic X-ray physics support would establish and guide the quality assurance program. Specific duties would include conducting or training others to conduct equipment performance monitoring functions, analyzing the monitoring results to determine if there are problems requiring correction, and carrying out or arranging for the necessary corrective actions as well as the required calibrations and other preventive maintenance. Paragraph (c)(1) would also require that the person furnishing diagnostic X-ray physics support meet minimum training, experience, and continuing education requirements pertinent to screening mammography. We solicit suggestions regarding what these requirements should encompass.

Paragraph (c)(2) provides an alternate set of criteria, which has been included in recognition of the fact that in some parts of the country, especially in the rural regions, individuals meeting the qualifications set forth in (c)(1) may be unavailable to the screening mammography facility. In such cases, paragraph (c)(2) permits the State radiation control agency to recognize other individuals from the private sector as being qualified to provide guidance to the facility for the establishment and maintenance of a quality assurance program. This is a logical extension of the programs already in existence in several States in which the State program identifies "qualified experts" in

the private sector capable of performing a variety of diagnostic radiology physics tests and corrective actions. It is also in accordance with recommendations to the States contained in the "Suggested State Regulations for the Control of Radiation" (developed by the Conference of Radiation Control Program Directors) concerning the identification of those qualified to furnish diagnostic X-ray physics support. We are soliciting comments from the public on this alternative approach and suggestions for other ways of identifying individuals who are qualified to establish and maintain a satisfactory quality assurance program.

The proposed § 494.56(d) was adopted from the language used in § 405.1413(c). Section 494.56(d) would require that records be maintained for each current employee and that the records include evidence that each employee is qualified for his or her position by means of appropriate State licensure, other certification, training, and experience.

We would add a new § 494.58 to set forth a condition specifying the requirements for obtaining and preserving screening mammography records. It was modeled after § 405.1414, which specifies similar requirements for the preservation of portable X-ray records. The proposed condition states that all reasonable efforts be made to obtain any of the beneficiary's previous screening mammography records including original images or films, copies of written reports prepared by interpreting physicians, and other relevant information pertinent to previous screening mammographies that might be available from others, for comparison with the current screening mammography records. We would also require that records of previous screening mammographies obtained and current and subsequent screening mammographies produced by the supplier must be properly preserved and made available to other qualified mammography suppliers or others that submit a written request authorized by the beneficiary. The two specific standards that § 494.58 would set forth are as follows:

- The supplier must make, for each beneficiary, a record of the screening mammographies it performs, including: the date the screening mammogram was made and the date of the interpretation; the name of the beneficiary; the name of the equipment operator and the name of the interpretating physician; a description of the procedures performed; the name of the referring physician (if any), or other physician (if any) identified by the beneficiary to receive the interpreting physician's written report; and the date the physician's written report was sent to the appropriate physician or beneficiary.
- The supplier must provide satisfactory assurances (as documented in its medical records) that the images or films of the first and subsequent screening mammography procedures and the related written reports of the physicians' interpretations for each woman who is a Medicare beneficiary are either placed in her permanent medical records kept by the supplier or sent to another person (including the beneficiary) for placement in the women's permanent medical record as directed by the woman or by her physician. In the case of a participating supplier who holds the woman's medical records, the records of the mammography procedure must be retained for a period of at least 60 calendar months following the date of service (or longer if required by State law). Some concern has been expressed that these records should be retained indefinitely, but we believe that a reasonable limit must be placed on the retention of these records. Therefore, we have specified 60 calendar months, which is the longest period of time that any other participating provider or supplier is currently required to retain medical records. However, we specifically ask for comments on this issue.

Additionally, we would add a new § 494.60 to set forth the technical standards for mammography equipment. We have included in these proposed standards the requirements set forth at 21 CFR 1020.30 (FDA standards for diagnostic X-ray systems and their major components) and 21 CFR 1020.31 (FDA standards for radiographic equipment) and have also adopted suggestions from the FDA and the ACR. However, it is important to note that general purpose X-ray systems with special attachments for mammography, which are permitted under the FDA performance standards, would not meet the requirements for this standard. This is because section 1834(e)(3)(A) of the Act states that "the equipment used to perform the mammography must be specifically designed for mammography." General purpose units with special attachments for mammography are designed for a wide range of diagnostic and screening examinations and therefore do not meet the statutory requirement that they be specifically designed for mammography.

At the annual meeting of the Conference of Radiation Control Program Directors that was held in May 1986, a 1985–86 Nationwide Evaluation of X-ray Trends (NEXT) survey was discussed. This survey, which was conducted by the Conference of Radiation Control Program Directors, found that 30 percent of the xerography units were specifically designed for mammography while 82 percent of the film/screen units were so designed (Fred Rueter, NEXT 1985, (Mammography) Fall 1987, Newsletter of the Conference of Radiation Control Program Directors, Attachment No. 3). However, on the basis of analysis performed by the FDA there are about twice as many film/screen units as xerography units so overall about 70 percent of the mammography systems met the proposed requirement in 1985–86 and only about 30 percent did not. Furthermore, the percentage of systems specifically designed for mammography has been increasing rapidly; the newly purchased systems are almost entirely of that type.

The FDA fully expects that the data from the NEXT 1988 survey will show that the percentage of units that would meet this general requirement would be above 70 percent and that the use of only specifically designed units for mammography will continue to grow.

Thus, the specific standards proposed in § 494.60 follow:

- The equipment must be specifically designed for mammography and identified by the manufacturer as designed only for mammography.
- The equipment must meet the FDA performance standards for diagnostic X-ray systems and their major components at 21 CFR 1020.30 and FDA's standards for radiographic equipment at 21 CFR 1020.31. (However, the FDA standards include general requirements for any type of X-ray equipment; they do not specify requirements designed specifically for mammography equipment. In addition, the published FDA standards do not address the subject of image receptor systems, which are essential to the consistent performance of quality mammograms. Therefore, the requirements that follow must be added to explain what is meant by the statutory phase "specifically designed for mammography.")
- The image receptor systems and all their individual components must be designed appropriately for mammography.
- The equipment must be limited to providing kV(kilovoltage)-target-filter combinations appropriate to image receptors.
- The nominal focal spot size of the X-ray tube must not exceed 0.7 mm.

• Devices parallel to the imaging plane must be available to immobilize and compress the breast.

• The equipment must have the capability for using anti-scatter grids.

• The equipment must have the capability of automatic exposure control.

• The equipment must have a control panel that includes a device (usually a milliammeter) or means for an audible signal to give positive indication of the production of X-rays whenever the X-ray tube is energized. The control panel must include appropriate indicators (labeled control settings or meters that show the physical factors such as kVp (kilovoltage potential), mAs (milliampere seconds), exposure time, or whether timing is automatic) used for exposure.

In a new § 494.62, we propose to set forth a condition concerning safety standards for mammography. In proposing this condition, we adapted the provisions of § 405.1415, which set the safety standards for portable X-rays. We would require that screening mammograms be conducted with equipment that is free from unnecessary hazards for patients, personnel, and other people in the immediate environment, and in accordance with procedures that provide minimum radiation exposure. These standards would include the following:

• Using proper safety precautions, including: adequate shielding for patients, personnel, and facilities. The equipment must be operable only from a shielded position.

• Use of exposure badges or other appropriate devices to measure the radiation exposure of personnel operating the equipment.

• Periodic inspection of equipment and shielding by a staff or consultant medical physicist or by a physicist approved by an appropriate State or local government agency as meeting the qualification requirements of § 494.56(c). Identified hazards must be promptly corrected.

• Use of shockproof and grounded equipment.

Finally, we would add a new § 494.64 to set forth quality assurance standards. These standards were written after consultation with representatives from the FDA and the ACR and, for the most part, incorporate the principles described in the FDA recommendations for quality assurance programs for diagnostic radiology facilities at 21 CFR 1000.55. Specifically, § 494.64 would require a supplier of mammography services to have an ongoing equipment quality assurance program specific to mammography imagery and covering all components of the X-ray system from X-ray generator to the image developer in order to ensure consistently high quality images with minimum patient exposure. We would specify that the supplier must conduct a general review of the program at least annually and employ (or hire on a consultative basis) a medical physicist who, under the direction of the supervising physician described in § 494.52, will be responsible for establishing and conducting the program. The specific standards set forth in proposed § 494.64 that follow are given to ensure that the level of quality assurance is consistent no matter which facility the patient visits:

• The medical physicist has the overall responsibility for establishing and conducting the ongoing equipment quality assurance program. The medical physicist's specific duties must include—

—Conducting or training others to conduct equipment performance monitoring functions;

—Analyzing the monitoring results to determine if there are problems requiring correction; and

—Carrying out or arranging for necessary corrective actions as well as calibrations and other preventive maintenance.

• All variable parameters of the equipment must be calibrated—

—When it is first installed;

—After any major changes or replacement of parts;

—At least annually during use; and

—When quality assurance tests indicate that calibration is needed.

• The supplier must routinely monitor the performance of the mammography system. The need to monitor the following parameters at the given frequencies is generally accepted by radiological experts.

—At a minimum, the parameters that must be monitored are—

Processor performance (through sensitometric-densitometric means);

Half value layer;

Output reproducibility and linearity;

Automatic exposure control reproducibility, kVp response, and thickness response;

Adequacy of film storage (both before use and after exposure if processing does not occur immediately);

Darkroom integrity;

Availability and use of technique charts that must include an indication of the kV-target-filter combination to be used with each image receptor;

Image quality (using a testing device called a "phantom", which simulates the composition of the breast and indicators of disease conditions, allowing objective analysis of clinical image quality); and

Dose.

—The equipment must be monitored frequently.

Processor performance and the use of a kV-target-filter combination appropriate to the image receptor must be monitored daily before patient irradiation.

Image quality must be monitored before patient irradiation with a phantom every time the unit is moved, altered in any major way including the replacement of parts, and at least monthly between movements or alterations.

The frequency of monitoring of all other parameters must be proportional to the expected variability of each parameter, but, at a minimum, monitoring must be conducted at least annually.

• *Standard—monitor evaluation.* Monitoring must be evaluated on a regular basis.

—Standards of image quality giving acceptable ranges of values for each of the parameters tested must be established to aid in the evaluation. The standards of image quality related to dose must include a requirement that the mean glandular dose for one craniocaudal view of a 4.5 cm compressed breast (50 per cent adipose/50 per cent glandular) must not exceed 100, 300, and 400 mrad (millirad) for film/screen units without grids, film/screen units with grids, and xerography units respectively. These dose values reflect generally accepted standards of practice.

—The monitoring results must be compared routinely to the standards of image quality. If the results fall outside the acceptable range, the test must be repeated. If the results continue to be unacceptable, the source of the problem must be identified and corrected before further examinations are conducted.

• A program to analyze retakes must be established as a further aid in detecting and correcting problems affecting image quality or exposure.

• Responsibility for each standard, from monitoring through the annual review, must be assigned to qualified personnel. These assignments must be documented in the supplier's record.

III. Regulatory Impact Analysis

A. Executive Order 12291 and Regulatory Flexibility Act

Executive Order 12291 (E.O. 12291) requires us to prepare and publish a regulatory impact analysis for any proposed rule that meets one of the E.O. criteria for a "major rule"; that is, that would be likely to result in—

- An annual effect on the economy of $100 million or more;
- A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- Significant adverse effects 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.

We generally prepare a regulatory flexibility analysis that is consistent with the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 through 612) unless the Secretary certifies that a proposed rule would not have a significant economic impact on a substantial number of small entities. For purposes of the RFA, all physicians and suppliers of screening mammography services and equipment are treated as small entities.

This proposed rule would implement section 204 of Public Law 100–360 to provide Medicare coverage of screening mammography. We anticipate that Medicare coverage of screening mammography would result in the following costs:

TABLE I.—PROJECTED COSTS AS A RESULT OF MEDICARE COVERAGE OF SCREENING MAMMOGRAPHY

[In millions] [1]

Fiscal year—				
1990	FY 1991	FY 1992	FY 1993	FY 1994
$150	$275	$325	$375	$425

[1] Rounded to the nearest 25 million.

Our projected costs are based on the following assumptions:

- An effective date of January 1, 1990.
- A 50-percent utilization rate across all age groups in calendar year 1990 rising five percent annually to reach 75 percent in calendar year 1995.

Below are estimates of the number of incurred screening mammographies.

TABLE II.—PROJECTED NUMBER OF INCURRED SCREENING MAMMOGRAPHIES AS A RESULT OF MEDICARE COVERAGE OF SCREENING MAMMOGRAPHIES

[In millions]

	Calendar year—				
	1990	1991	1992	1993	1994
Total	4.9	5.5	6.1	6.7	7.4

We estimate that in FY 1990 there would be 7,000 screening mammography facilities increasing to 9,000 in FY 1991. The total cost of surveying and certifying these 9,000 facilities would be approximately $3.5 million.

We believe that any effects of these provisions on the economy and public would primarily be the result of the statute and not this proposed rule. This is because we have proposed to implement the statute exercising administrative discretion in only the following four areas: the equipment standards for screening mammography; the safety standards for screening mammography; specifying who we consider to be a high risk individual for the purpose of determining the frequency of screening mammography for an asymptomatic woman over 39 years of age, but under 50; and the Board certification we would accept. In section II of this preamble, we discuss our rationale for choosing specific provisions. As discussed in the analyses below, with one exception, we do not believe these provisions would result in effects that meet E.O. 12291 or Regulatory Flexibility Act criteria. That exception is the proposed equipment standards for screening mammography of Medicare beneficiaries. The equipment must be specifically designed for mammography and identified by the manufacturer as designed only for mammography. We are not able to determine the costs associated with this exception. For that reason, and because Medicare coverage of screening mammography represents a significant expansion of Medicare benefits, we are providing voluntary regulatory impact and regulatory flexibility analyses.

1. Background

Congressional hearings held in 1986 projected that in 1987 approximately 110,000 women would be diagnosed as having new primary cases of breast cancer, and approximately 47,000 deaths from breast cancer would occur (Medicare Coverage for Mammography Examinations: Hearings Before the Subcommittee on Health of the House Committee on Ways and Means, 100th Cong., 1st Sess. 6 (1987)). Furthermore, it was estimated that one out of every ten women would develop the disease in her lifetime (ibid. note 1, at 66).

Additionally, the Subcommittee report stated that women 65 and older are about one and one-half times as likely as women in the 40–64 age group to develop breast cancer. It was projected that in 1987 about 48,000 (44 percent) of the new primary cases and about 24,000 of breast cancer deaths would occur in women over age 65 ("The Feasibility of Breast Cancer Screening," Health Technology, 1:26–37, 1987).

Some medical experts believe that appropriate use of screening mammography, in conjunction with clinical examination and breast self examination, can enable health care suppliers to detect many breast cancers at their earliest stage (op. cit. note 1, at 66).

2. Effects on Physicians and Other Healthcare Suppliers

We believe that a great number of the supervising physicians and most of the interpreting physicians who perform screening mammographies are radiologists. As of December 31, 1986, there were 8,345 radiologists practicing in the United States with 6,365 being certified by their corresponding board (Physician Characteristics and Distribution in the U.S., 1986. Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1987). Radiologists, as a group, had a physician participation rate of 40 percent in 1987 and a Medicare assignment rate of 73 percent in 1986.

We believe that Medicare coverage of screening mammography would result in increased utilization over current levels on the part of Medicare eligible women. A logical outgrowth of this increased utilization would be an increase in demand for those who provide the services and supplies that constitute the screening mammography field, namely: supervising physicians, interpreting physicians, medical physicists, radiological technologists, and suppliers of screening mammography services and equipment.

The effect of this proposed rule on an individual radiologist, physician, or other health care supplier would depend on the percentage of their business that involves Medicare eligible women and the percentage of their business that involves performing screening mammographies. Clearly, this would vary among practicing radiologists, physicians, and other healthcare suppliers. Additionally, we believe that

suppliers of screening mammography equipment would experience increased demand for their equipment.

The upper limit for a screening mammography service performed in 1990 would be $50. In subsequent years, the upper limit would be increased by the percentage increase in the Medicare Economic Index (MEI) for that subsequent year.

Nonparticipating physicians would be affected by this proposed rule. Section 1834(e)(5)(B) of the Act, with respect to screening mammography performed by a nonparticipating physician, places an upper limit on the amount that a nonparticipating physician or supplier can charge beneficiaries. In 1990, the first year of implementation, the upper charge limit would be 125 percent of the payment limit, which would be $62.50. In 1991, the upper charge limit would be 120 percent of the payment limit, and in subsequent years, the upper charge limit would be 115 percent of the payment limit.

Below is a discussion of several areas in which we are using administrative discretion with respect to physicians and other health care suppliers and a discussion of why we believe, with the exception of the proposed equipment standards, their effects on these entities would be negligible.

First, in developing the equipment standards for screening mammography, we have incorporated FDA requirements and have also adopted suggestions from the FDA and ACR. Although in certain respects the proposed equipment standards go beyond what is currently required by the FDA for diagnostic X-ray systems and radiographic equipment, we believe that the majority of physicians and healthcare suppliers would be able to meet them. This belief is based on the 1985–86 NEXT survey discussed in section II.B. of the preamble. This survey, conducted by the Conference of Radiation Control Program Directors, found that approximately 70 percent of currently existing mammography systems would meet the equipment standards we are proposing and about 30 percent would not.

Those physicians that possess mammography systems that would not meet the proposed equipment standards would incur additional expenses if they choose to meet these standards. One major factor in their decision as to whether to purchase this equipment might be the percentage of their patient population that are Medicare beneficiaries. We are unable to determine this percentage or the percentage of physicians who currently do not meet these proposed standards and would choose to comply with them. Thus, we cannot estimate the cost of compliance.

Second, in developing safety standards for screening mammography, we adapted the safety standards currently in use for portable X-ray equipment. Thus, for the most part the equipment and safety standards we are proposing are drawn from currently used standards and, therefore, would place little if any additional burden on most healthcare suppliers.

Third, the statute allows the Secretary to specify in regulations the appropriate organization to certify that an individual is qualified to perform radiological procedures and the appropriate board to certify that an individual is qualified to interpret radiological procedures, or be board eligible, or meet equivalent qualifications. We are proposing the use of two board certifying organizations—the American Board of Radiology and the American Osteopathic Board of Radiology. Use of these particular board certifying organizations poses no additional burden on radiologists since those organizations' board certification requirements are no more restrictive than current Medicare requirements that radiologists must meet in order to perform radiological services other than screening mammographies for Medicare beneficiaries.

Furthermore, as stated in section II.B. of the preamble, in consultation with the FDA, ACR, and NCI, we would require in § 494.54(b) that the interpreting physician meet several experience and continuing education standards specifically related to mammogram reading and interpretation. We believe that it is necessary to have these standards in order to implement the intent of Congress with regard to the safety and accuracy of screening mammography for Medicare beneficiaries.

We believe it is reasonable to expect physicians who perform screening mammographies for Medicare beneficiaries to have the experience and training in this area required by these proposed standards. Moreover, we do not believe that these proposed standards are onerous.

Lastly, at a new § 494.52, we would establish a condition requiring supervision of screening mammography by a qualified physician. As stated in section II.B. of the preamble, the physician supervisor must be a licensed doctor of medicine or licensed doctor of osteopathy who meets the requirements for the interpretation of screening mammograms as specified in § 494.54. The language we would use is similar to that used in 42 CFR 405.1412(a) which sets forth a supervising physician standard for coverage for portable X-ray services and 42 CFR 405.1412(b) which sets forth the required qualifications of the supervising physician. Because the supervising physician coverage standards we are proposing are drawn from currently used standards, we believe they would place little if any additional burden on most supervising physicians.

3. Effect on Beneficiaries

We believe that the effect of this proposed rule on beneficiaries would be a positive one. After meeting the $75 part B deductible, the only expense a beneficiary would incur for a covered screening mammography would be the 20 percent coinsurance if the physician performing the service is a participating physician. For calendar year 1990, this would be no more than $10 (20 percent coinsurance × $50 limit). (If a nonparticipating physician is used, the physician is limited in what he or she can charge.)

There is an area in which we are using administrative discretion with respect to beneficiaries. The statute allows us to specify who we consider to be a high risk individual for the purpose of determining the frequency of screening mammography for an asymptomatic woman over 39 years of age, but under 50. The guidelines we proposed are ones we received from the National Cancer Institute of the National Institutes of Health. We believe they are broad enough to capture those asymptomatic women who have a demonstrable need for a screening mammography.

B. Rural Hospital Impact Statement

Section 1102(b) of the Act requires the Secretary to prepare a regulatory impact analysis if a proposed rule may have a significant impact on the operations of a substantial number of small rural hospitals. Such an analysis must conform to the provisions of section 603 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital with fewer than 50 beds located outside of a Metropolitan Statistical Area.

We are not preparing a rural impact statement since we have determined, and the Secretary certifies, that this proposed rule would not have a significant economic impact on the operations of a substantial number of small rural hospitals.

IV. Information Collection Requirements

Proposed regulations at §§ 494.52, 494.54, 494.56, 494.58, and 494.64 contain

information collection and recordkeeping requirements that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1980 (44 U.S.C 3501 *et seq.*). The information collection requirements concern written reports on examination results, interpretations, and employee records. The respondents who would provide the information are suppliers of mammography services. Public reporting burden for this collection of information is estimated to be [estimate to be provided before final publication] minutes/hours per response. A notice will be published in the **Federal Register** after approval is obtained. Organizations and individuals desiring to submit comments on the information collection and recordkeeping requirements should direct them to the OMB official whose name appears in the "ADDRESS" section of this preamble.

V. Response to Comments

Because of the large number of items of correspondence we normally receive on a proposed rule, we are not able to acknowledge or respond to them individually. However, we will consider all comments that we receive by the date and time specified in the "DATE" section of this preamble, and, if we proceed with a final rule, we will respond to the comments in the preamble of that rule.

List of Subjects

42 CFR Part 405

Administrative practice and procedure, Health facilities, Health professions, Kidney diseases, Laboratories, Medicare, Nursing homes, Reporting and recordkeeping requirements, Rural areas, X-rays.

42 CFR Part 410

Health facilities, Health professions, Kidney diseases, Laboratories, Medicare, Rural areas, X-rays.

42 CFR Part 413

Health facilities, Kidney diseases, Medicare, Reporting and recordkeeping requirements.

42 CFR Part 494

Mammography, X-rays, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, 42 CFR chapter IV would be amended as follows:

PART 405—FEDERAL HEALTH INSURANCE FOR THE AGED AND DISABLED

A. Part 405, subpart C is amended as set forth below:

Subpart C—Exclusions, Recovery of Overpayment, Liability of a Certifying Officer, and Suspension of Payment

1. The authority citation for subpart C is amended to read as follows:

Authority: Secs. 1102, 1815, 1833, 1834, 1842, 1861, 1862, 1866, 1870, 1871 and 1879 of the Social Security Act (42 U.S.C. 1302, 1395g, 1395l, 1395m, 1395u, 1395x, 1395y, 1395cc, 1395gg, 1395hh, and 1395pp) and 31 U.S.C. 3711.

2. In Section 405.310 the introductory text of the section and the introductory text of paragraph (a) are reprinted and (a)(1) is revised to read as follows:

§ 405.310 Particular services excluded from coverage.

The following services are excluded from coverage.

(a) *Routine physical checkups such as*—

(1) Examinations performed for a purpose other than treatment or diagnosis of a specific illness, symptom, complaint, or injury, except for screening mammography (including a physician's interpretation of the results) that meets the payment requirements specified at § 410.34 of this chapter and the conditions for coverage at subpart B, part 494 of this chapter.

* * * * *

B. Part 405, subpart E is amended as set forth below:

Subpart E—Criteria for Determination of Reasonable Charges; Radiology Fee Schedules; and Reimbursement for Services of Hospital Interns, Residents, and Supervising Physicians

1. The authority citation for subpart E continues to read as follows:

Authority: Secs. 1102, 1814(b), 1832, 1833(a), 1834 (b) and (e), 1842 (b) and (h), 1861 (b) and (v), 1862(a)(14), 1866(a), 1871, 1881, 1886, 1887, and 1889 of the Social Security Act as amended (42 U.S.C. 1302, 1395f(b), 1395k, 1395l(a), 1395m (b) and (e), 1395u (b) and (h), 1395x (b) and (v), 1395y(a)(14), 1395cc(a), 1395hh, 1395rr, 1395ww, 1395xx, and 1395zz).

2. A new § 405.534 is added to read as follows:

§ 405.534 Limitation on payment for screening mammography services.

This section implements section 1834(e) of the Act by establishing a limit on payment for screening mammography examinations. There are three categories of billing for screening mammography services. Those categories and the payment limitations on each follow:

(a) *Global or complete service billing representing both the professional and technical components of the procedure.* When a global service fee is billed, the amount of payment subject to the deductible is equal to 80 percent of the least of the—

(1) Actual charge for the service;

(2) Amount determined with respect to the professional and technical components for the service under §§ 405.530 through 405.533; or

(3) Limit for the procedure. For services furnished in calendar year 1990, the limit is $50. On January 1 of each subsequent year, the limit will be updated by the percentage increase in the Medicare Economic Index (MEI).

(b) *Professional component billing representing only the physician's interpretation for the procedure.* When the professional component of screening mammography services is billed separately, the amount of payment for that professional component subject to the deductible is equal to 80 percent of the least of the—

(1) Actual charge for the professional component of the service;

(2) Amount determined with respect to the professional component for the service under §§ 405.530 through 405.533, which set forth the methodology for computing payments for radiologist services; or

(3) Professional portion of the screening mammography limit. This amount is determined by multiplying the screening mammography limit described in paragraph (a)(3) of this section by 37 percent.

(c) *Technical component billing representing other resources involved in furnishing the procedure.* When the technical component of screening mammography services is billed separately, the amount of payment subject to the deductible is equal to 80 percent of the least of the—

(1) Actual charge for the technical component of the service;

(2) Amount determined with respect to the technical component for the service under §§ 405.530 through 405.533; or

(3) Technical portion of the screening mammography limit. This amount is determined by multiplying the screening mammography limit described in paragraph (a)(3) of this section by 63 percent.

3. A new § 405.535 is added to read as follows:

§ 405.535 Special rules for nonparticipating physicians furnishing screening mammography services.

If screening mammography services are furnished to a beneficiary by a nonparticipating physician or supplier who does not accept assignment, a special limiting charge applies to the charges made to the beneficiary. The limiting charge is the lesser of—

(a) The amount determined using § 405.533 (special rules for nonparticipating physicians furnishing radiology services); or

(b) A percentage of the payment limit for screening mammograms as follows:

(1) 125 percent of the payment limit in 1990;

(2) 120 percent of the payment limit in 1991; and

(3) 115 percent of the payment limit beginning January 1, 1992.

PART 410—SUPPLEMENTARY MEDICAL INSURANCE (SMI) BENEFITS

C. Part 410, Subpart B is amended as set forth below:

1. The authority citation for part 410 is revised to read as follows:

Authority: Secs. 1102, 1832, 1833, 1834, 1835, 1861, (r), (s) and (cc), 1871, and 1881 of the Social Security Act (42 U.S.C. 1302, 1395k, 1395l, 1395m, 1395n, 1395x, (r), (s) and (cc), 1395hh, and 1395rr).

2. Section 410.1 is amended by revising paragraph (a) to read as follows:

§ 410.1 Basis and scope.

(a) *Statutory basis.* Section 1832 of the Social Security Act establishes the scope of benefits provided under the Medicare Part B supplementary medical insurance (SMI) program. Sections 1833, 1834, 1835, and 1862 set forth the amounts of payment for SMI services, the conditions for payment, and the exclusions from coverage. Section 1861 defines the kinds of services that may be covered.

* * * * * * *

Subpart B—Medical and Other Health Services

3. In § 410.10, the introductory text is reprinted and paragraph (t) is added to read as follows:

§ 410.10 Medical and other health services: Included services.

Subject to the conditions and limitations specified in § 410.12, "medical and other health services" includes the following services:

* * * * *

(t) Screening mammography services.

§ 410.35 [Redesignated from § 410.34]

4. The current § 410.34 is redesignated as § 410.35, and a new § 410.34 is added to read as follows:

§ 410.34 Conditions for coverage for and limitations on coverage for screening mammography services.

Effective January 1, 1990, Medicare pays for screening mammography services (including physician interpretation of the results). Screening mammography is defined as a radiologic procedure furnished to a woman for the purpose of early detection of breast cancer and includes a physician's interpretation of the results of the procedure.

(a) Coverage is available for screening mammography services only if furnished by a screening mammography supplier that meets all the conditions for coverage of screening mammography specified in subpart B of part 494 of this chapter.

(b) The following limitations apply to coverage of screening mammography services:

(1) The service must be a four-view exposure (that is, a cranio-caudal and a medial lateral oblique view of each breast) furnished by a supplier that meets the conditions for coverage of screening mammography services specified in subpart B of part 494 of this chapter.

(2) Payment may not be made for screening mammography performed on an asymptomatic woman under 35 years of age.

(3) Payment may be made for only 1 screening mammography performed on an asymptomatic woman over 34 years of age, but under age 40.

(4) For an asymptomatic woman over 39 years of age, but under age 50, the following restrictions apply:

(i) Payment may be made for a screening mammography performed after at least 11 months have passed since the last screening mammography if the woman has—

(A) A personal history of breast cancer;

(B) A personal history of biopsy-proven benign breast disease;

(C) A mother, sister, or daughter who has had breast cancer; or

(D) Not given birth prior to age 30.

(ii) If the woman does not meet the conditions described in paragraph (b)(4)(i) of this section, payment may be made for a screening mammography performed after at least 23 months have passed since the last screening mammography.

(5) For an asymptomatic woman over 49 years of age, but under age 65, payment may be made for a screening mammography performed after at least 11 months have passed since the last screening mammography.

(6) For an asymptomatic woman over 64 years of age, payment may be made for a screening mammography performed after at least 23 months since the last screening mammography.

PART 413—PRINCIPLES OF REASONABLE COST REIMBURSEMENT; PAYMENT FOR END-STAGE RENAL DISEASE SERVICES

D. Part 413, subpart F is amended as set forth below:

1. The authority citation for Part 413 is revised to read as follows:

Authority: Secs. 1102, 1122, 1814(b), 1815, 1833(a), 1834(e), 1861(v), 1871, 1881, and 1886 of the Social Security Act as amended (42 U.S.C. 1302, 1320a–1, 1395f(b), 1395g, 1395l(a), 1395m(e), 1395x(v), 1395hh, 1395rr, and 1395ww).

Subpart F—Specific Categories of Costs

2. A new § 413.123 is added to read as follows:

§ 413.123 Payment for screening mammography performed by hospitals on an outpatient basis.

(a) *Basis and scope.* This section implements section 1834(e)(1)(C) of the Act and establishes the method for determining Medicare payment for screening mammographies performed by hospitals.

(b) *Payment to hospitals on an outpatient basis.* Payment to hospitals for screening mammography services performed on an outpatient basis (described in § 410.33 of this chapter) is determined in accordance with § 405.534(c) of this chapter.

E. A new part 494 is added to read as follows:

PART 494—CONDITIONS FOR COVERAGE OF PARTICULAR SERVICES

Subpart A—General Provisions [Reserved]

Subpart B—Conditions for Coverage of Screening Mammography

Sec.

494.50 Condition for coverage: General.

494.51 Conditions for coverage: Compliance with Federal, State, and local laws and regulations.

494.52 Condition for coverage: Supervision by a qualified physician.

494.54 Condition for coverage: Interpretation of the results of screening mammography procedures.

494.56 Condition for coverage: Qualifications and orientation of technical personnel, and retention of employee records.

Sec.

494.58 Condition for coverage: Obtaining and preserving records.
494.60 Condition for coverage: Equipment standards.
494.62 Condition for coverage: Safety standards.
494.64 Condition for coverage: Quality assurance.

Authority: Secs. 1833(a)(2)(E), 1834, 1861, 1862(a), 1863, 1864(a), 1865(a), 1902(a)(9)(C), and 1915(a)(1)(B)(ii)(I) of the Social Security Act (42 U.S.C. 13951(a)(2)(E), 1395m, 1395x, 1395y(a), 1395z, 1395aa(a), 1395bb(a), 1396a(a)(9)(C), and 1396n(a)(1)(B)(ii)(I)).

Subpart A—General Provisions [Reserved]

Subpart B—Conditions for Coverage of Screening Mammography

§ 494.50 Condition for coverage: General.

To be approved for participation in the Medicare program a supplier of screening mammography services must meet all the conditions set forth in this subpart with respect to individuals entitled to Medicare part B.

§ 494.51 Conditions for coverage: Compliance with Federal, State, and local laws and regulations.

The supplier of screening mammography services must comply with all applicable Federal, State, and local laws and regulations pertaining to radiological services and screening mammography services. This includes—

(a) Licensure or registration of supplier;

(b) Licensure or registration of personnel;

(c) Licensure or registration of equipment;

(d) Compliance with safety laws.

§ 494.52 Condition for coverage: Supervision by a qualified physician.

(a) *Standard: Qualifications of the physician supervisor.* Screening mammography services must be furnished under the supervision of a licensed doctor of medicine or licensed doctor of osteopathy who meets the requirements for the interpretation of the results of the screening mammography procedure as specified in § 494.54.

(b) *Standard: Physician supervision.* The provision of all screening mammography services must be supervised by a physician who must document in writing annually that—

(1) He or she has checked the procedural manuals and has observed monthly the operators' performance;

(2) He or she has verified that equipment and personnel meet applicable Federal, State, and local licensure and registration requirements;

(3) Safe operating procedures are used; and

(4) All the other requirements of this subpart are being met.

§ 494.54 Condition for coverage: Interpretation of the results of screening mammography procedures.

The results of all screening mammography procedures must be interpreted by a physician who meets the following certification, experience, continuing education, and written report requirements:

(a) *Standard: Board certification.* The interpreting physician must—

(1) Be certified by the American Board of Radiology or by the American Osteopathic Board of Radiology; or

(2) Possess equivalent certification qualifications.

(b) *Standard: Experience and continuing education.* (1) For physicians first meeting the board certification requirements or meeting other equivalent certification requirements described in paragraph (a) of this section before January 1, 1990, the physician must also—

(i) Have been reading the results of an average of 10 or more screening or diagnostic mammographies per work week in the 6 months preceding January 1, 1990.

(ii) Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation in the 24 months preceding January 1, 1990;

(iii) Have successfully completed a minimum of 40 hours of post-graduate work in mammography interpretation every 24 months after January 1, 1990; and

(iv) Continue to read the results of an average of 10 or more screening or diagnostic mammographies per work week after he or she begins to read screening mammographies for Medicare beneficiaries.

(2) For physicians first meeting the board certification requirement or meeting other equivalent certification qualifications described in paragraph (a) of this section on or after January 1, 1990, the physician must also—

(i) Have been reading the results of an average of 10 or more screening or diagnostic mammographies per work week in the 6 months preceding when he or she begins reading screening mammographies for Medicare beneficiaries;

(ii) Have successfully completed a minimum of 40 hours of post-graduate instruction in mammography interpretation in the 24 months preceding when he or she begins reading screening mammographies for Medicare beneficiaries.

(iii) Have successfully completed a minimum of 40 hours of post-graduate work in mammography interpretation every 24 months after the date he or she begins reading screening mammographies for Medicare beneficiaries; and

(iv) Continue to read the results of an average of 10 or more screening or diagnostic mammographies per work week after he or she begins to read screening mammographies for Medicare beneficiaries.

(c) *Standard: Written and signed report.* The interpreting physician must—

(1) Prepare and sign a written report on his or her interpretation of the results (that is, images or films) of the screening mammography procedure;

(2) Provide a copy of the written report and the original images or films to the patient's screening mammography supplier for inclusion in the patient's permanent medical record; and

(3) Provide a written statement to the patient, in terms easily understood by a lay person. The statement must describe the importance of the screening mammography to her ongoing health (including a description of the steps that should be taken if the results of the mammography procedure are positive), as well as her responsibility to share with any new physician or supplier of her next screening mammography procedure, the date and place of her previous screening mammography procedure. The statement must record the date of the procedure, the name of the facility providing the procedure, the physician (if any) to whom the woman wants a copy to be sent, and must indicate that the original images or films have been provided to the screening mammography supplier for inclusion in the woman's permanent medical record.

§ 494.56 Condition for coverage: Qualifications and orientation of technical personnel, and retention of employee records.

(a) *Standard: Qualifications of operators of screening mammography equipment.* Anyone operating screening mammography equipment must—

(1) Be licensed by the State to perform radiological procedures, or, in States that have no licensure requirements, be certified in radiography by the American Registry of Radiologic Technologists, the American Registry of Clinical Radiographic Technologists, or possess equivalent certification qualifications;

(2) Have successfully completed a program of formal training in radiologic

technology of not less than 24 months' duration in a school that meets the requirements of appendix A (Standards for Accreditation of Educational Programs for Radiographers) of 42 CFR part 75, or that is approved by the Council on Allied Health Education and Accreditation; and

(3) Have completed specialized training in mammographic positioning, compression, and technique factor settings in the 24 months preceding January 1, 1990 (or in the 24 months preceding the time he or she begins performing screening mammographies for Medicare beneficiaries), and complete this specialized training every 24 months thereafter.

(b) *Standard: Personnel orientation.* The supplier of screening mammography services must have an orientation program for operators of mammography equipment based on a procedures manual that is available to all members of the staff and that incorporates relevant documents, and instructions concerning the following:

(1) Precautions to protect the operator of the equipment, the patient and individuals in the surrounding area from unnecessary exposure to radiation.

(2) Determination of the area that will receive the primary beam (breast positioning).

(3) Pertinent information on compression, exposure levels, resolution, contrast, noise, examination identification, artifacts, and average glandular dose per view.

(4) Employee responsibilities concerning the proper use of personal radiation monitors.

(5) Proper use and maintenance of equipment, including a discussion of the image receptors appropriate for use with mammography and the kV-target-filter combination to be used with each image receptor.

(6) Proper maintenance of records.

(7) Possible technical problems and solutions.

(8) Protection against electrical hazards.

(9) Hazards of excessive exposure to radiation.

(c) *Standard: Qualifications of individuals furnishing diagnostic x-ray physics support.* Individuals furnishing diagnostic x-ray physics support must meet one of the following qualifications.

(1) The individual must be certified by the American Board of Radiology as a diagnostic medical physicist or possess equivalent qualifications. Additionally, the individual must meet minimum training, experience, and continuing education requirements pertinent to screening mammography.

(2) The individual must be recognized by a State radiation control agency as qualified to provide oversight of the establishment and conduct of the quality assurance program in § 494.64, which sets forth the standards of a quality assurance program for screening mammography required as a condition of coverage.

(d) *Standard: Employee records.* Records are maintained to show that each employee is qualified for his or her position by means of appropriate State licensure, other certification, training, and experience.

§ 494.58 Condition for coverage: Obtaining and preserving records.

All reasonable efforts must be made by the supplier of the current examination to obtain any of the beneficiary's previous screening mammography records, including original images and films, copies of written reports prepared by interpreting physicians, and other relevant information pertinent to previous screening mammographies that might be available from others, for comparison with the current screening mammography records. Records of previous screening mammographies obtained and of current and subsequent screening mammographies performed by the supplier must be properly preserved and made available to other qualified mammography suppliers or others that submit a written request authorized by the beneficiary.

(a) *Standard: Records of screening mammography services performed by the supplier.* The supplier must make, for each beneficiary, a record of the screening mammography services it provides, including—

(1) The date the screening mammography procedure was performed and the date of the interpretation;

(2) The name of the beneficiary;

(3) The name of the operator of the equipment and the name of the interpreting physician;

(4) A description of the procedures performed;

(5) The name of the referring physician (if any), or other physician (if any) identified by the beneficiary to receive the interpreting physician's written report; and

(6) The date the physician's written report was sent to the appropriate physician or beneficiary.

(b) *Standard: Preservation of records.* The supplier must provide satisfactory assurances (as documented in its medical records) that the images or films of the first and subsequent screening mammography procedures and the related written reports of the physicians' interpretations for each beneficiary are either placed in her permanent medical record kept by the supplier, or sent to another person (including the beneficiary) for placement in the beneficiary's permanent medical record as directed by her or by her physician. If the records of the examination must be retained by the supplier, they must be retained for a period of at least 60 calendar months following the date of service (or longer if required by State law).

§ 494.60 Condition for coverage: Equipment standards.

The equipment used to perform mammography must be specifically designed for mammography and must meet the following standards:

(a) *Standards: Equipment design.* The equipment must be specifically designed for mammography and identified by the manufacturer as designed only for mammography.

(b) *Standard: FDA standards.* The equipment must meet the FDA performance standards for diagnostic X-ray systems and their major components at 21 CFR 1020.30 and FDA's standards for radiographic equipment at 21 CFR 1020.31.

(c) *Standard: Image receptor systems.* The image receptor systems and all their individual components must be designed appropriately for mammography.

(d) *Standard: kV-target-filter combinations.* The equipment must be limited to providing kV-target-filter combinations appropriate to image receptors meeting the requirements of paragraph (c) of this section.

(e) *Standard: Focal spot size.* The nominal focal spot size of the X-ray tube must not exceed 0.7 mm.

(f) *Standard: Devices to immobilize and compress the breast.* Devices parallel to the imaging plane must be available to immobilize and compress the breast.

(g) *Standard: Anti-scatter grids.* The equipment must have the capability for using anti-scatter grids.

(h) *Standard: Automatic exposure control.* The equipment must have the capability of automatic exposure control.

(i) *Standard: Control panel indicators.* The equipment must have a control panel that includes a device (usually a milliammeter) or means for an audible signal to give positive indication of the production of X-rays whenever the X-ray tube is energized. The control panel must include appropriate indicators (labeled control settings of meters that show the physical factors such as

kilovoltage potential (kVp), milliampere seconds (mAs), exposure time, or whether timing is automatic) used for exposure.

§ 494.62 Condition for coverage: Safety standards.

Screening mammograms must be conducted using equipment and operating procedures free of unnecessary hazards and providing minimum radiation exposure to patients, personnel, and other persons in the immediate environment.

(a) *Standard: Safety precautions.* Proper safety precautions must be maintained. This includes adequate shielding for patients, personnel, and facilities. The equipment must be operable only from a shielded position.

(b) *Standard: Exposure badges.* Personnel operating the equipment must wear badges or other appropriate devices to measure their radiation exposure.

(c) *Standard: Equipment inspection.* Periodic inspection of equipment and shielding must be made by a staff or consultant medical physicist or by a physicist approved by an appropriate State or local government agency as meeting the qualification requirements of § 494.56(c). Identified hazards must be promptly corrected.

(d) *Standard: Protection against electrical hazards.* All equipment must be shockproof and grounded.

§ 494.64 Condition for coverage: Quality assurance.

The supplier must have an ongoing equipment quality assurance program specific to mammography imagery, and covering all components of the X-ray system, from the X-ray generator to the image developer, to ensure consistently high-quality images with minimum patient exposure. The supplier must conduct a general review of the program at least annually, and have available the services of a person qualified to furnish diagnostic X-ray physics support who, under the direction of the supervising physician described in § 494.52, is responsible for establishing and conducting the program.

(a) *Standard: Responsibility for the quality assurance program.* Under the direction of the supervising physician, the person furnishing diagnostic X-ray physics support has the overall responsibility for establishing and conducting the ongoing equipment quality assurance program. That individual's specific duties must include—

(1) Conducting or training others to conduct equipment performance monitoring functions;

(2) Analyzing the monitoring results to determine if there are any problems requiring correction; and

(3) Carrying out or arranging for the necessary corrective actions as well as for the calibrations and other preventive maintenance.

(b) *Standard: Calibration of equipment.* All variable parameters of the equipment must be calibrated—

(1) When the equipment is first installed;

(2) After any major changes or replacement of parts;

(3) At least annually during use; and

(4) When quality assurance tests indicate that calibration is needed.

(c) *Standard: Performance monitoring.* The supplier must routinely monitor the performance of the mammography system.

(1) At a minimum, the parameters that must be monitored are—

(i) Processor performance (through sensitometric-densitometric means);

(ii) Half value layer;

(iii) Output reproducibility and linearity;

(iv) Automatic exposure control reproducibility, kVp response, and thickness response;

(v) Adequacy of film storage (both before use and after exposure if processing does not occur immediately;

(vi) Availability and use of technique charts that must include an indication of the kV-target-filter combination to be used with each image receptor;

(vii) Darkroom integrity;

(viii) Image quality (using a testing device called a "phantom", which simulates the composition of the breast and indicators of disease conditions, allowing objective analysis of clinical image quality); and

(ix) Dose.

(2) The equipment must be monitored as follows:

(i) Processor performance and the use of a kV-target-filter combination appropriate to the image receptor must be monitored daily before patient irradiation.

(ii) Image quality must be monitored with a phantom every time the unit is moved, altered in any major way including the replacement of parts, and at least monthly between movements or alterations.

(iii) The frequency of monitoring all other parameters must be proportional to the expected variability of each parameter, but monitoring must be conducted at least annually.

(d) *Standard: Evaluation of monitoring results.* Monitoring must be evaluated on a regular basis.

(1) Standards of image quality giving acceptable ranges of values for each of the parameters tested must be established to aid in the evaluation. The standards of image quality related to dose must include a requirement that the mean glandular dose for one craniocaudal view of a 4.5 cm compressed breast (50 percent adipose/50 percent glandular) must not exceed 100, 300, and 400 mrad (millirad) for film/screen units without grids, film/screen units with grids, and xerography units, respectively.

(2) The monitoring results must be compared routinely to the standards of image quality. If the results fall outside the acceptable range, the test must be repeated. If the results continue to be unacceptable, the source of the problem must be identified and corrected before further examinations are conducted.

(e) *Standard: Retake analysis program.* A program to analyze retakes must be established as a further aid in detecting and correcting problems affecting image quality or exposure.

(f) *Standard: Responsible personnel.* Responsibility for each standard, from monitoring through the annual review, must be assigned to qualified personnel. These assignments must be documented in the supplier's records.

(Catalog of Federal Domestic Assistance Program No. 13.774, Medicare—Supplementary Medical Insurance.)

Dated: June 30, 1989.

Approved: August 18, 1989.

Louis B. Hays,

Acting Administrator, Health Care Financing Administration.

Louis W. Sullivan,

Secretary.

[FR Doc. 89-20605 Filed 8-31-89; 8:45 am]

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CFR PARTS AFFECTED DURING SEPTEMBER

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.

LIST OF PUBLIC LAWS

Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws.**

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TABLE OF EFFECTIVE DATES AND TIME PERIODS—SEPTEMBER 1989

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
September 1	September 18	October 2	October 16	October 31	November 30
September 5	September 20	October 5	October 20	November 6	December 4
September 6	September 21	October 6	October 23	November 6	December 5
September 7	September 22	October 10	October 23	November 6	December 6
September 8	September 25	October 10	October 23	November 7	December 7
September 11	September 26	October 11	October 26	November 13	December 11
September 12	September 27	October 12	October 27	November 13	December 11
September 13	September 28	October 13	October 30	November 13	December 12
September 14	September 29	October 16	October 30	November 13	December 13
September 15	October 2	October 16	October 30	November 14	December 14
September 18	October 3	October 18	November 2	November 17	December 18
September 19	October 4	October 19	November 3	November 20	December 18
September 20	October 5	October 20	November 6	November 20	December 19
September 21	October 6	October 23	November 6	November 20	December 20
September 22	October 10	October 23	November 6	November 21	December 21
September 25	October 10	October 25	November 9	November 24	December 26
September 26	October 11	October 26	November 13	November 27	December 26
September 27	October 12	October 27	November 13	November 27	December 26
September 28	October 13	October 30	November 13	November 27	December 27
September 29	October 16	October 30	November 13	November 28	December 28